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Geography—Paleopathology*

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BIOGRAPHY INDEX

BOOK REVIEW DIGEST

BUSINESS PERIODICALS INDEX

CUMULATIVE BOOK INDEX

CURRENT BIOGRAPHY

ESSAY INDEX

FICTION CATALOG

INDEX TO LEGAL PERIODICALS

LIBRARY LITERATURE

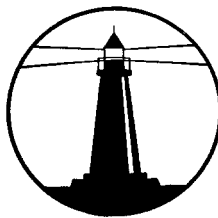
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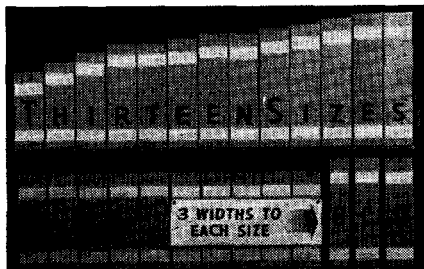
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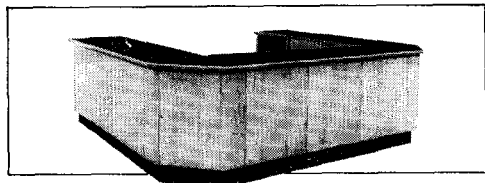


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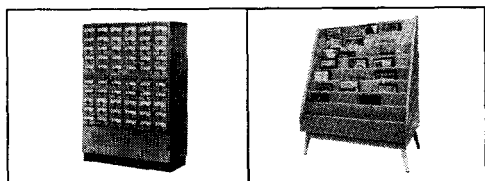
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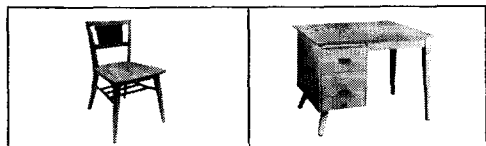
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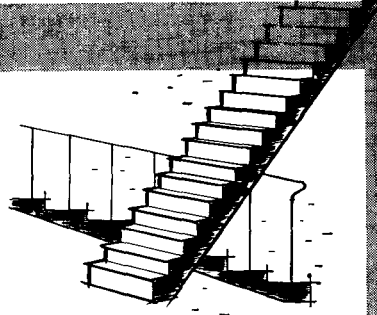
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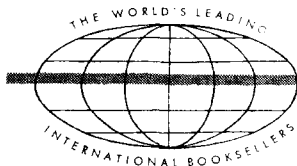
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Volume 52, No. 5

CONTENTS

MAY-JUNE 1961

Simultaneous Preparation of Library Catalogs for Manual and Machine Applications	ROBERT E. DURKIN and HERBERT S. WHITE	231
Automation Raps at the Door of the Library Catalog	CHARLES A. VERTANES	237
International Conference on Cataloging Principles	MRS. CHARLOTTE F. C. SHENK	243
Modification of Dewey for a Business Library	MRS. SUZANNA LENGYEL	245
Classification Schemes for Electronics and Data Processing	ELLIS MOUNT	246
Geography and Map Cataloging and Classification in Libraries	DR. ARCH C. GERLACH	248
Joint Libraries Committee on Fair Use in Photocopying: Report on Single Copies		251
Current Concentrates of the Library World		256
This Works For Us: Preparing Catalog Cards in the Library	LORETTA J. KIERSKY	258

SPECIAL LIBRARIES ASSOCIATION

Association News	259
SLA Sustaining Members	260
52nd SLA Convention Speakers	261
SLA Convention Program Summary	266

NEWS

Have You Heard	244, 255, 260, 268
Spotted	247
Off The Press	272

Editor: MARY L. ALLISON

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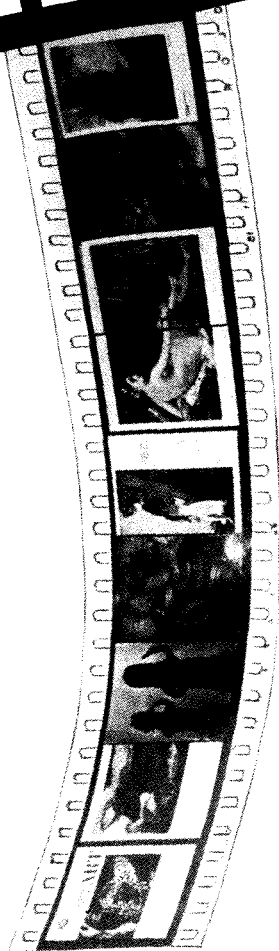
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SPECIAL LIBRARIES

Simultaneous Preparation of Library Catalogs for Manual And Machine Applications

ROBERT E. DURKIN, Technical Librarian

HERBERT S. WHITE, Manager, Engineering Library

IBM Command Control Center, Federal Systems Division, Kingston, New York

THE WIDESPREAD introduction of data processing equipment into industrial and governmental organizations has begun to raise two difficult and paradoxically contradictory problems for special libraries.

Many librarians are being pressured, against their desires, into using this equipment as a replacement for manual processing techniques. At the same time, other librarians, anxious to try this equipment as a solution to pressing manpower shortages, are being rebuffed by their managements. Both objections are well-grounded and deep-rooted.

Resistance by librarians to the lure of glamorous electronic equipment may be based in part on the natural conservatism and resistance to change that is so prevalent in many of us. It is more likely, however, that it is caused by the realization that the librarian is trading a manual cataloging system over which he has complete control for one in which he is at the complete mercy of a machine system he cannot operate and cannot commandeer. There have been a number of unfortunate examples of libraries that abandoned their home-grown catalogs for a machine retrieval program because there was some free computer time, only to lose their machine time to a higher priority project and to be left with information storage to which they no longer have access. Many of these librarians, and others who have heard about their plight, are determined not to burn their bridges behind them by abandoning their reliable, if old-fashioned, 3 x 5 card catalogs.

Management's objections to library use of data processing equipment are much simpler to explain—in general, Management believes that such a usage will not provide any sav-

ings. Electronic machines are expensive when compared to the cost of typing and filing catalog cards, and librarians have been largely unsuccessful in proving savings to be realized from a conversion to machine equipment.

Former Manual Procedures

The use of mechanical equipment for the IBM Command Control Center Library's processing operations seemed very desirable when we first began serious consideration of the feasibility of such a system in the spring of 1960. It was felt that, as a leading organization in the data processing field, IBM had a considerable interest in developing a practicable system for library usage. In addition, the library was faced with a rate of growth in books and documents which would, in 1960, more than triple the 1959 acquisitions. We knew that we would have to handle this growth without corresponding increases in staff. We were already encountering serious delays in our processing schedules and could only anticipate a worsening of this condition with a continuation of present practices.

At the time we began considering a mechanical processing system, catalog cards for all books and technical reports were prepared by typing entries one time onto sheets of white paper, with margins marked to indicate the limits of the catalog card. To permit more information to be placed on one card and to allow room to line up all tracings on the right-hand side of the card, the dimensions of the card were 30 per cent larger than the 3 x 5 inch standard size. In the reproduction department this information was transferred to an offset lithograph master

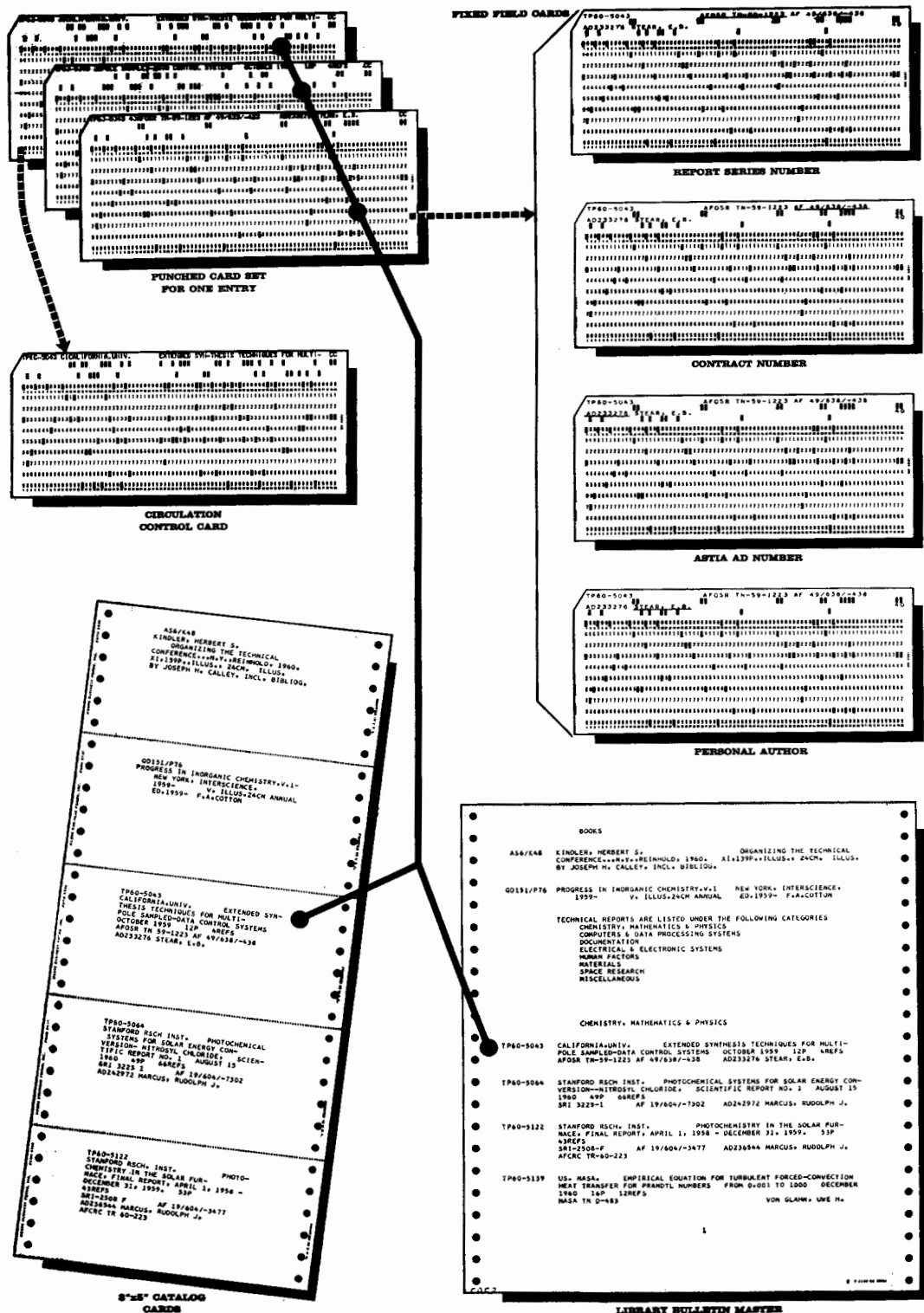


Figure 1: 3 x 5 Catalog Cards, Library Bulletin Masters, Circulation Control Cards And Fixed Field Cards Can Be Produced Directly from Punched Cards.

through an electrostatic camera, which permitted simultaneous reduction to the 3 x 5 format. From this master enough cards were printed to permit filing under all the forms of entry maintained. These included corporate author, personal author, book title, report series, contract number, ASTIA AD or OTS PB number, shelf list and the required number of subject headings.

One additional set of catalog cards was utilized to produce the weekly library bulletin, by taping the cards in the desired arrangement to a backing sheet and then preparing a master to reproduce the bulletin through photo-offset lithography.

Conditions for a Mechanical System

In formulating our approach to the attempted use of mechanical equipment, it was determined that the following conditions would have to be met:

1. The system would produce cards capable of being interfiled with the standard card catalog already in existence. All file approaches already in effect would be retained.
2. The weekly library bulletin would result from the same input that generated the catalog cards.
3. The system to be developed would provide economic advantages by decreasing the processing cost per document and by relieving the library staff of part of its workload. This would, of course, require the use of relatively inexpensive punched card equipment and simple machine techniques.

It was our feeling that, as long as these three conditions could be met, we would operate with what was in effect a "money-back guarantee" and had absolutely nothing to lose. If it became necessary at a future time to return to a manual processing system because of machine unavailability or reversal of a management decision, this could be done without the loss of any information.

Further advantages in a mechanical processing system were also considered:

1. Mechanical processing would speed the cataloging, announcement and distribution of technical material to library users. As has been pointed out, processing time lags were a growing problem in our manual system.

2. As a by-product of mechanical processing all library information would be available in machineable punched card form. The flexibility of punched cards would permit their application to a variety of library routines by providing the basic record for circulation transactions and overdue notices, published reading lists and book catalogs. In addition, punched card data is readily transferred to magnetic tape—a faster form of input for computer controlled data processing such as an automatic information retrieval program.

All of the specifications, both required and desired, have been met, and other advantages not originally discernible have also become apparent. It must be emphasized, however, that the system about to be described was initially justified and instituted simply as a faster and cheaper way to produce catalog cards and a library bulletin.

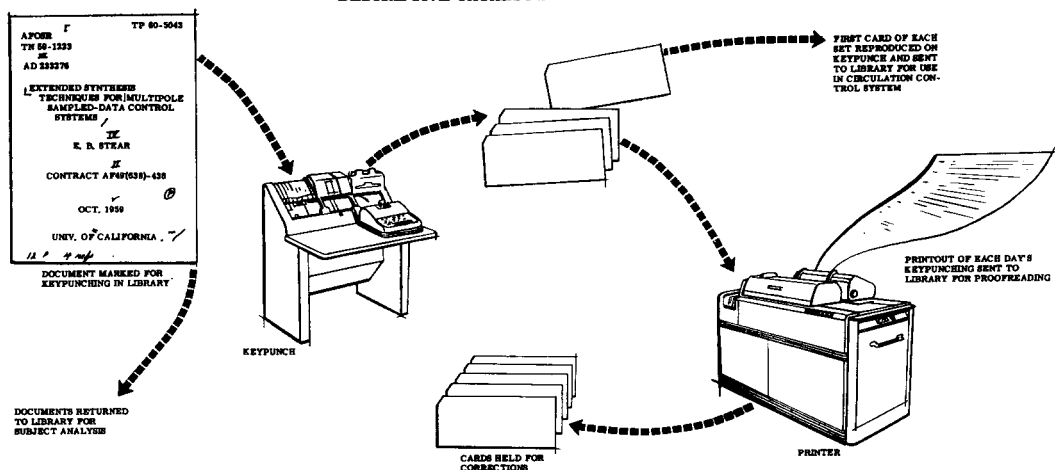
Library-Machine Room Coordination

To start the system, it was necessary to establish a close liaison with the engineering computer support department, which is responsible for the operation of the machine equipment used in mechanical processing. Preliminary meetings were held in which the library's requirements were outlined and discussed in terms of the capabilities of the machines. This led to the design of a machine system and the general outline of procedures for handling the library's processing operations.

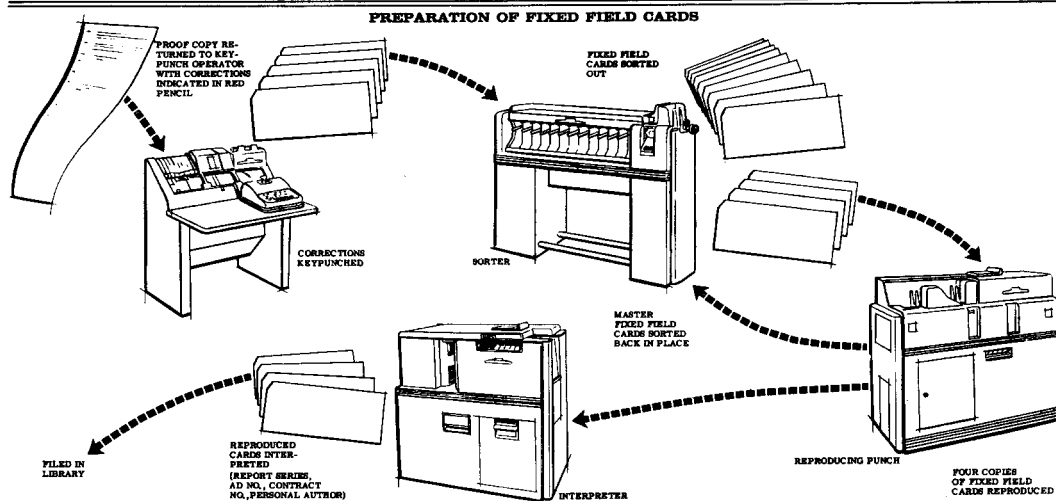
Under the former system, catalog cards were prepared by a clerk-typist working directly from a book or document that had previously been marked with standard symbols. These symbols indicated the various elements of the bibliographic entry to be included on the card.

It was felt that keypunch operators, with a minimum of training, were capable of interpreting these same symbols for the keypunching operation. Any number of punched cards could be used for a single entry as long as each card carried the same book or document number to identify it as belonging to the same set and as long as the cards in each set were numbered in proper sequence. This provision, we felt, gave as much flexibility to the form of entry as typing.

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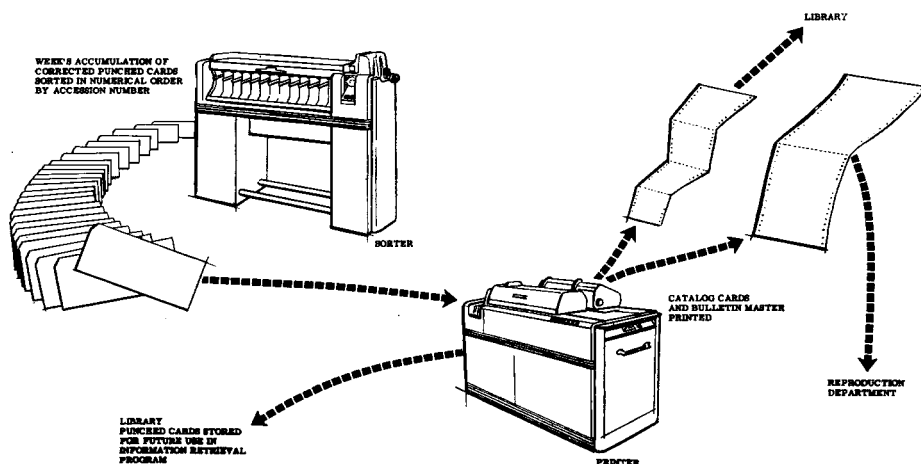


Figure 2: Flow of Material And Sequence of Operations When Utilizing Simple Data Processing Equipment.

To prepare specific keypunching instructions, the format of the punched card had to be determined. This in turn depended on the machine that was to do the printing, in our case the IBM 407 electric accounting machine. Among the many capabilities of this machine is the ability to print out a card-by-card interpretation of its punched card input.

The output we required, as called for in the basic specifications for the system, was a 3 x 5 inch catalog card resembling as closely as possible the format used on the manually prepared cards and the cards ordered from the Library of Congress. We wanted to do this not so much from a desire to maintain the "tradition" of the catalog card format but because library users have experience in searching for information in one arrangement, and we did not want to confuse them.

We anticipated some problems in achieving this format because the standard 80-column IBM card produces, through the IBM 407, an eight-inch line of printing. The problem this represents with respect to a 3 x 5 inch card is most easily solved by utilizing only that portion of the punched card that will result in a printed line less than five inches long. We were spared this uneconomical use of punched cards, however, by the fact that the 407 can be programmed, through its control panel wiring, to print two lines on a 3 x 5 inch card from 80 columns of keypunched information. At the same time, in printing out the library bulletin onto paper 8½ inches wide, a full 80-column reproduction from the IBM card was completely acceptable.

Through a system of switches mounted externally on the machine, the same control panel could be used for the 3 x 5 catalog card print-out, in which one line of a punched card became two lines on a catalog card, and the library bulletin master, in which each line was reproduced exactly as punched into the card. Once a panel was wired, it could be stored and re-used without additional effort.

Since it was our firm intention to retain at least all cataloging approaches previously utilized under the manual system, it was simple to ascertain that we would require

approximately 12 cards for each report or book cataloged.

It was also apparent that one of the greatest costs would be in the repeated run-through of the punched card deck to print out these 12 cards. This was true even though it was found possible—again through manipulation of the wiring on the control panel—to print two catalog cards simultaneously through the use of a continuous fan-fold form with detachable pin-feed edges. This form is a standard item sold by a number of business forms companies.

We decided to restrict the traditional catalog entry containing all bibliographic information to the main entry card, the shelf list card and six subject cards. These eight cards could be produced by four passes of the deck through the IBM 407. The other four entries were 1) report series number, 2) contract number, 3) ASTIA AD number and 4) first personal author. We assumed these to be essentially different in nature from the other entries in that they do not have the same "browsing" requirement. In other words, if a library user is armed with this sort of information about a technical report, his query, being extremely specific, can be satisfied simply by indicating the location of the report in the library. Figure 1 shows how this is accomplished by having these items keypunched, in every case, in four "fixed fields" of the last punched card for each report. By having this last card reproduced four times on a reproducing punch and having the punches interpreted in printed form at the top of the card, we are provided with a punched card on which each of the entries indicated is printed together with the accession number of the document.

We quickly found another advantage in this process. Punched catalog cards could be filed as soon as keypunching had been completed, before the document was announced in the library bulletin and before the printed 3 x 5 cards were available.

Design of Punched Card Format

Bearing in mind the desire to approximate the "traditional" catalog card format, we proceeded to design the format of the punched card. Consistency of punched card

format is essential for data processing systems because the job that an electric accounting machine is wired to perform depends on the passage of electrical signals through certain areas of the punched card. Primarily, the areas of an IBM card to be considered are the 80 columns into which it is divided. Each of these columns can be punch coded to signal the presence of a number or a letter. There are also a limited number of punctuation marks and symbols that can be punched. The card may also be considered as divided into various "fields"; each field consists of one or more columns and is reserved for specific types of information. The following were established for this part of the system:

COLUMNS

- 1-10: Document accession number or book call number
- 11-12: Card sequence number
- 13-48: In the first card of each set, author and the beginning of the title. Column 48 is considered the end of one line on the 3 x 5 catalog card.
- 49-78: Continuation of the title and other elements of the bibliographic entry not contained in the "fixed field" cards. (Columns 13-48 and 49-78 of subsequent cards are used for the continuation of the bibliographic entry.)
- 79: Broad subject category code. This is only used for sorting the cards into subject categories for listing on the bulletin.
- 80: A control punch for the machine.

As described earlier, the last punched card for each technical report entry was to contain, in certain "fixed fields," the information we felt could be filed in punched card form. Columns 13-78 were divided for this information in the following manner:

COLUMNS

- 13-29: Corporate author code and report series number
- 30-48: Contract number
- 49-57: ASTIA AD number
- 58-78: Personal author

Columns 1-10 and 79-80 contain the same information as the other cards of the same

set. The card sequence number in columns 11-12 is always the number 40. This permits sorting these cards out of the deck easily for reproducing. The number 40 was selected because it was inconceivable to us that more than 39 punched cards would ever be needed for the bibliographic entry, even if we eventually decided to include an abstract. The "40" cards would, therefore, always be the last cards of the punched card sets and could be extracted from the master deck simply by sorting in column 11 for the number 4.

Operation Procedures

The complete system with the flow of material and the sequence of operations is illustrated in Figure 2. Descriptive cataloging is done in the library by the same personnel who performed descriptive cataloging under the manual system. The title page of the item to be cataloged is marked, using standard symbols to indicate the various elements of the bibliographic entry which are then keypunched. All sorting, duplicating and printing is carried on from this point in the engineering computer support department. The library maintains control over its own and keypunching accuracy by receiving proofreading print-outs of all keypunching before the final processing. Once a week the library receives the output of the past week's work in the form of printed catalog cards, which are ready for subject heading and filing, and a Multilith bulletin master, which is ready for reproduction and distribution.

Books and reports are returned to the library for subject analysis immediately after keypunching is completed. For subject analysis, descriptors from the ASTIA Thesaurus are used, modified where necessary to meet our particular requirements. Descriptors for as many as six of the main subject concepts are prepared for the 3 x 5 tracings card print-out. These descriptors are used as subject headings in the card catalog. The tracings card is filed with the shelf list card. In addition to these six main subjects, descriptors representing a more complete and detailed subject analysis are keypunched at this time solely for storage, so that our file of retrieval terms will be as complete as possible when

we are ready to move into computer-controlled information retrieval.

As evidenced by the illustrations in Figure 1, the first two principal conditions we set for utilizing machine methods are met in this system. The output is in a form entirely compatible with the existing card catalog, and the library bulletin is produced.

The third and final of these conditions—economic feasibility—has been established by a comparative analysis of this and the former processing system. This comparison shows that a saving of 17 man-hours was achieved in the over-all processing operation per 100 items cataloged. Since many of the processing tasks formerly performed in the library were taken over by the operators of the machines or by the machines themselves, the savings in work specifically for the library staff were even greater, totaling 30 man-hours per 100 items.

Many of the additional advantages sought through the system were immediately evident. The time between receipt of material and its announcement in the library bulletin, for example, was reduced by two weeks.

By filing the reproduced fixed field cards, some of the major card catalog approaches were provided almost immediately. Complete cataloging is dependent only on the more time-consuming process of subject analysis for which, as yet, no satisfactory mechanization has been devised.

All records are maintained in storage for

future utilization in other punched card or computer programs. We are primarily interested, of course, in using this data in an automatic information retrieval system. We have plenty of time, however, to study the best methods for doing this, because our processing system simultaneously provides the raw data required for computer operation and the indispensable manual approach of the 3 x 5 card catalog.

Summary and Conclusions

The system described has permitted the IBM Command Control Center Engineering Library to produce its catalog cards and library bulletin both faster and cheaper. Since a by-product of this process is the preparation of all catalog information in punched card form, it has also permitted the establishment of a circulation control system, the publication of overdue notices and reading lists and the eventual institution of a computer information retrieval program.

The process described can be used by any organization possessing the most rudimentary machine equipment. It requires only a key-punch, a sorter, a reproducing punch, a printer and an interpreter—all relatively simple and inexpensive machines already in use for accounting and other data processing functions in most organizations large enough to maintain special library services. The process can be adapted easily to any make of this type of equipment already available.

Automation Raps at the Door Of the Library Catalog

CHARLES A. VERTANES, Former Librarian

Long Island Lighting Company, Hicksville, New York

EARLY LAST spring a professor of library science held before his class an odd-sized tome, 8½ by 11 inches in dimension, consisting of 316 pages and held together by a black plastic spiral binding between two green covers. Describing it in brief, he said, "In this unusual volume you are witnessing a

prototype, an experimental model of the library catalog of the future, which will one day displace the established card catalog of the present day."

Shortly after this a specimen page of this *Catalog* was projected against a giant screen in the main ballroom of the Sheraton-Cleve-

land Hotel at one of the general sessions of the Special Libraries Association Annual Convention. It was one of several illustrations used by Marjorie Griffin of the IBM Advanced Systems Development and Research Library, in connection with her paper, "Printed Book Catalogs." (See *Special Libraries*, November 1960, p. 496-9, for an extract and *Revue de la Documentation*, February 1961, p. 8-17, for the complete paper.) In the main body of her address Miss Griffin classed the *LILCO Catalog* among the few known "more sophisticated systems using more machines, and giving more information," revealing "initiative and resourcefulness in the attempt to communicate to the user the resources of the library." She then described the main features of the *Catalog* itself and concluded by characterizing it as an "inclusive" record of the holdings of a library whose "very compactness should make it welcome in every engineer's office and to the administrative staff."

There are, however, those who do not take to printed catalogs. Adverse reactions are not uncommon in an occupation as steeped in established procedure as is librarianship; but the far-reaching implications of utilizing electronic and automatic devices for library work explain why some librarians are parting company with established practices in certain branches of their art and are seeking answers to their problems in new schemes and skills made possible by the contemporary breakthrough in science and technology.

The most important development for the production of printed catalogs by means of data processing equipment is the advance made in the past year or two in high-speed printing output. The claim is 600 lines a minute for the high-speed printer of the Remington Rand Univac Solid-State Computer and 900 lines a minute for the transistorized Honeywell 400 and the more sophisticated Honeywell 800. At these rates, the 316 pages of *LILCO Library Printed Catalog* with its 56 lines per page could be "typeset" for photo offset printing in a matter of less than 30 or 20 minutes, respectively. The actual time taken for the same operation of the first edition on the IBM 407 was just about two hours, at the rate of 150 lines a minute.

Background of LILCO Catalog

The *LILCO Library Printed Catalog* was projected to answer to the needs of a geographically dispersed public utility in a growing suburban-industrial community adjoining the City of New York. The area served by the organization covers 1,230 square miles and is in the throes of economic growth and social change. Much of this growth was anticipated by the Long Island Lighting Company, which itself underwent a parallel development as it lit new homes and powered new machinery across the Island. In this dynamic setting, about two and a half years ago the company established a central library and supplied it with the initiative and means that made possible the production of the *Printed Catalog*.

The first edition of the *Printed Catalog* came out in March 1960 after months of planning and exacting effort. Policy, management, technique, skill and labor all played a part in its realization. Although the idea was initiated by the manager of the Department of Research and Records and developed by the librarian, the net product was the fruit of coordinated institutional effort. "With the launching of the *Printed Catalog*," said Charles E. Elbert, Secretary and Assistant to the President of the Company, LILCO Library "may be said to have come of age." The development of the library through the *Catalog* and otherwise represents "another helpful step in the total program of the company to serve its public."

Advantages of a Printed Catalog

Now that a year has passed since its appearance, the *Catalog* is still considered by company personnel as the best introduction to the published holdings of the company, the best starting point for access to the resources of the library and an excellent bibliographical tool on its own account. Initially its distribution was limited to some 90 geographical areas in the company. Since then many copies have been placed in areas not adequately covered by the initial distribution, and additional copies have been sent to frequent users of the library who wished to keep one at elbow-reach at their desk.

The purposes of the *Printed Catalog* are described in the preface to: 1) make the books and other published holdings of the company accessible to the personnel who find the services of the library necessary in their work; 2) provide them with a continuing, revised, classified and cataloged inventory of the holdings; 3) promote the scope, reduce the cost and time factor in the services of the library; 4) facilitate the purchase of published materials and prevent unnecessary duplications through purchase; and 5) enhance loans through interlibrary arrangements in the case of limited needs that do not justify acquisition through purchase.

The *Printed Catalog* was never intended to replace the library's card catalog but instead to extend and facilitate its use. The card catalog contains much information that does not appear in the *Printed Catalog*. Part of this information is for library use; part of it is available to users but is not in frequent demand by them. The *Printed Catalog* is the answer to the problem of geographical distances between the company's offices and plants, and the time and transportation involved in maintaining direct, personal communication between them and the central library in Hicksville. The card catalog remains the nerve center of the company's comprehensive library program; but for personnel in all locations to consult it directly and effectively would frequently entail long, time-consuming and costly trips.

The *Printed Catalog* makes it possible for users to see items listed in relation to one another and to their aggregate groupings. Requests for loans are initiated merely by referring to the items desired by their call numbers. Only when an item is not listed or a subject not adequately covered, does it become necessary to give other identifying data, commence a search in the card catalog, resort to interlibrary loan or proceed with purchase. Even in cases where the central library has to be consulted for additional information or requests are initiated that do not have their origin in the *Printed Catalog*, familiarity with its contents enables users to present their problem with greater precision. The *Printed Catalog* is by far the best frame of reference for the efficient use of LILCO

Library, even for those who are within easy reach of its premises. The library staff itself finds it a handier tool in many cases than the less compact and the relatively disconnected card catalog.

The *Printed Catalog* also contributes to a fuller exploitation of the resources of the library. It promotes discriminative use of the published holdings of the company. It reveals at a glance the strong and weak points in various subject areas and focuses attention on glaring duplications and serious gaps in the collection. It fosters care and caution in requisitioning publications for purchase.

The punched cards from which the *Printed Catalog* was reproduced make it possible for the library to compile bibliographies on special subjects, by simply pulling out of the files relevant cards, sorting them alphabetically by author, title or subject and then putting them through the 407 accounting machine or any other computer printing machine. The library can do this on request, on its own initiative or as an established routine at stated intervals, to guide reading, introduce new acquisitions or supply bibliographical commentary on current interests and projects. A reading list so prepared is flexible in length and arrangement of information and can include the call number, either at the beginning or at the end of the reference.

Contents and Format

The format and spiral binding of the *Catalog* were chosen for ease of handling and ease of access to its contents. Paragraphing was limited to seven lines of text to enable the eye to travel with comfort across the page and to pick up an item within a line or a paragraph almost at sight.

In designing the form and preparing the text many problems were faced that are peculiar to the mechanical devices employed. However, without these devices *LILCO Library Printed Catalog* would not have been possible. The novelty and experimental character of the project and the haste with which the first edition had to be pushed through to completion, left the door open for many corrections, revisions and improvement in general. In succeeding editions the oversights and laxities in the first one will be

rectified, flaws in the system will be remedied and errors in the text will be corrected.

The dimensions of the book and the relative size and configuration of its various parts are revealed in the table of contents:

	PAGE
Preface	A1
Introduction	A3
Abbreviations Used in Catalog	A9
Organizations Abbreviated in Author Lists	A37
Main Collection	
Title Index	1
Subject Index	
Accounting	82
Business & Business Management	87
Engineering	93
Finance & Economics	133
General Business	138
Labor & Personnel Relations	154
Sales	160
Miscellaneous	166
Author Index	171
Other Collections	
Periodicals and Serials	249
Newspapers	261
Films and Film Strips	
In Library	265
In Education and Training Division	269
Clipping File	271
Miscellaneous	272

Under "Miscellaneous" are listed some of the more important minor collections of the library, such as the printed indexes to books and periodicals, annual or other periodic indexes of individual magazines, documents relating to the history of the company and the vertical file of ephemeral literature.

The bulk of the book is taken up with three principal indexes—title, subject, and author. Their order is an "accident" of sorting three ways—with the least expense—one set of IBM cards. It may be changed to the conventional order of author, title and subject in the next edition, when the particular economy factor will no longer be present.

As far as subject matter is concerned, all three indexes cover the same ground. They differ only in the order or sequence in which references are listed. The title and subject indexes give the various bibliographical data in the same order. The subject index references are in the same alphabetical title order as in the title index but in a different sequence. The difference is caused by the divi-

sion of the title index list into eight subject groups. The author index reverses the order of the first two sets of columns, so that the author's name comes first. The sequence of the references in this index is consequently altogether different from those in the other two.

The order of the last four sets of columns in all three indexes is the same. The first of these gives the name of the publisher in code letter, the key to which is found in the list of abbreviations. The second gives the last two figures of the year of publication, so that 41 stands for 1941, and 84 for 1884. The third gives the letters that stand for the classification in which a title is placed. In each of the eight groups in the subject index, the letters that appear in this set of columns are always the same. The last set of columns gives the call number by which an item may be requested.

It should be noted that the names of authors and organizations recorded in the author columns, the wording of titles, except insofar as they are abbreviated, publishers, publication dates and the subject classifications, all appear in the *Catalog*, with rare exceptions, in the form in which they were given to the library by the various departments reporting to it.

The key to "Organizations Abbreviated in Author Lists" is intended as an aid in locating the shortened form in which the names of some organizations appear in the author index. These and all abbreviations used in the title and the other sets of columns were necessitated by the limited space available, since an IBM card provides for only 80 unit letters or digits. The principle followed in coining the abbreviations was that their meaning be self-evident. This led in some cases to the use of more than one form of abbreviation for a given word. Most of these will be reduced to a single form in later editions of the *Catalog*.

The present *Printed Catalog* is particularly useful to those who know the name of the author and/or title of a work they wish to locate. The title and author indexes are for this purpose. The subject index is primarily an inventory of the published holdings of the company in the seven subject areas and

the miscellaneous grouping into which it is divided. It is, nevertheless, astonishing how much, despite its limited scope, the subject index has been used by inquirers to inform themselves of the holdings of the company in given subject fields and how useful they have found it in compiling bibliographical lists for specific purposes.

The alphabetization of the entries was determined in most cases by the limitations or "logic" of the sorting machine. The sorting machine is responsible, for example, in keeping apart the Scotch "Mac"s and the Irish "Mc"s, which the editor would have preferred to keep together. The machine is also responsible for the word-by-word instead of letter-by-letter order, so that "A New Concept" appears before "Absenteeism." The user of the *Catalog* who keeps this in mind seldom has difficulty in locating items. The list of abbreviations is not in alphabetical order beyond the first three letters, since only the first three columns of the IBM cards were sorted. Consequently some abbreviations require searching in the neighborhood of their context.

In a few instances where titles start with Arabic numerals, they have been removed from the place assigned them by the machine and relocated where they would have been had they been spelled out, so that "5" is listed where "Five" would have been placed by the machine.

When a work has more than one author or editor, only the name of the first is given and "et al" is substituted for the rest. Neither is the character of the authorship, such as editor or compiler, specified.

Flaws and Flexibility

The flaws of the first edition of *LILCO Library Printed Catalog* as a whole fall into two categories: one group may be attributed to the novelty of the idea, the experimental character of the project, and the hasty workmanship, and the second are those inherent in the structure of the mechanical devices employed in its production. Some in the second category may be circumvented; others will have to be put up with.

Revision, improvement and development are built-in features in the production scheme

of *LILCO Library Printed Catalog*. They are based on the same criteria used in designing the library's classification system, establishing its cataloging forms and procedures and implementing both—purpose, need, feasibility, efficiency, function and the availability of resources. In relation to the organizational variability of the library, this built-in flexibility may be illustrated by the way it would reflect a fundamental change in the current practice of shelving items in the main collection by the Uniterm numbers assigned to them, an arrangement similar to shelving books by their accession numbers. Although this practice was instituted as an emergency measure to help the library begin operating, it has been found satisfactory for the current needs of the library and amenable to the size of its present staff. However, should it become necessary to adopt one of the conventional systems of classification, such as the Library of Congress or Dewey, both the cards in the card catalog and in the organizational scheme of the *Printed Catalog* can register this change or addition. Also punched cards for items weeded out from collections may be dropped and new cards for material acquired may be added.

Changes for Future Editions

In contrast to the planning phase for changes, the actual production procedure is a fairly simple editorial one of preparing the text for punching and submitting the "copy" to the data processing department. After the cards are punched, they are checked for corrections and then assembled, either manually or mechanically, into their pre-designed complexes in master files. When the date for printing the *Catalog* approaches, the librarian or editor in charge of the project sets down the specifications for the new edition and sends these to the data processing department with a requisition to schedule the job. The actual printing is done under the direct supervision of the editor to effect last-minute corrections of possible errors in the planning and programing, to assure as perfect a copy as possible.

To maintain the unity of the text in later editions, a network of cross references will relate material continued from previous edi-

tions and the fresh material edited and introduced according to new, revised rules, in cases where the differences between them would tend to disrupt the normal alphabetical order of entries in any of the indexes. This will save the high cost of re-editing older material to conform to the new, without impairing access to the full contents.

Provision for bibliographical information other than that covered in the present *Printed Catalog* could be made by a redistribution of the columns on the IBM cards. For example, with the possible obsolescence of the three columns now used for the rough subject classification, these columns could be reassigned to any one or more of the other sets of columns. At least two could be transferred to the author columns, to make room for identifying the character of authorship in cases where the author is an editor, compiler or the like. The system could also be expanded from one to two or more cards if more data are desired in the catalog.

Beginning with the second edition of the *Catalog*, its three main indexes will be reproduced from three sets of IBM punched cards, each one filed alphabetically according to its approach to the main collection of the library. Thereafter, each set will be maintained as a separate file and kept up to date between the editions. This innovation in production is dictated by considerations of economy as well as efficiency. Duplicating punched cards is relatively cheap. It will do away with the more costly, cumbersome three-way machine sorting of one set of cards employed in the production of the first edition. The new system will further reduce the amount and frequency of machine time needed for the preparation of the text. Perhaps of even greater importance is the new dimension of depth in the retrieval system of the *Catalog* that will be possible with the maintenance of three sets of punched card files. The separate author, title and subject files will lend themselves to the introduction of "added" or "secondary" entries common to standard card catalogs.

Conclusions

The idea of a printed catalog for the holdings of a library is not a new one, although

it appears so in the United States where the card catalog has become the standard medium for access to library collections. The reason for the popularity of the card form has been the low cost in maintaining it as an up-to-date tool. For multiple copies, however, the printed catalog costs less, although with conventional methods of printing, they are out of date the day they go to press.

The printed catalog produced by means of automatic equipment combines the best features of the conventional card catalog and the traditional printed catalog, and adds to both new dimensions that would have been unbelievable a generation ago. Periodic editions up-dating its contents are possible as are periodic cumulated supplements between the editions. Such supplements are more competent than supplements to indexes produced through conventional methods of printing, whose cumulations are not sufficiently cumulative. New equipment makes it possible for a user of an index produced by such means never to consult more than two alphabets—that of the main volume, and that of the fully cumulated supplement.

New equipment also makes it possible for individual libraries to replace or supplement their card catalogs with printed ones. Industrial libraries, in particular, with their relatively small collections but pressing need for time-saving devices, will find it a means of meeting the literature and information needs of the personnel of the firms they serve. In general, the system is adaptable to libraries that serve organizations and patrons that are geographically dispersed and are faced with communication problems in opening their resources to them. In this class would fall many industrial firms and all union catalogs and library systems that embrace a large number of units spread over a wide area.

The writer is gratefully indebted to Charles E. Elbert, Secretary and Assistant to the President, and Arvid E. Friberg, Jr., Manager of the Department of Research and Records, both of the Long Island Lighting Company, for their contributions to the inception and development of *LILCO Library Printed Catalog* on which this article is based. He also gratefully acknowledges the help received from Richard J. Tasker, Manager of the Data Processing Department of the company, in working out some of the mechanical details of the *Catalog*.

International Conference on Cataloging Principles

MRS. CHARLOTTE F. CHESNUT SHENK, Chief, Technical Library
Army Ballistic Missile Agency, Redstone Arsenal, Alabama

THE IFLA (International Federation of Library Associations) International Cataloging Conference will be held at Unesco House in Paris, October 9-18, 1961. IFLA, with headquarters in Berne, Switzerland, is comprised of 86 library associations in 51 countries. In the United States, the American Library Association, the Special Libraries Association and the Medical Library Association are members. The Federation works through international committees, and the meeting in Paris will be promoted by the Working Group on Cataloging Principles.

The Council on Library Resources has given IFLA a grant of \$95,420 toward the expenses of the meeting, and Unesco will also assist in the planning and organization of the Conference. In commenting on the grant Verner W. Clapp, President of the Council on Library Resources, said, "If there were international coordination of cataloging rules, research libraries everywhere might be spared much time and expense, and errors and confusion of books could be reduced and avoided entirely. Uniformity of cataloging would also be of inestimable service to scholars."

Representatives of a number of international organizations and of 50 national library groups are expected to attend the ten-day meeting. Spokesmen from several national libraries and special libraries are also expected to be present. Preparations have been made for some observers at the Conference, and the organizing committee has issued announcements requesting names of those who wish to attend in this capacity. Frank C. Francis, Director and Principal Librarian of the British Museum, London, is the chairman, and the official representative of all American library associations is Wyllis E. Wright, Librarian, Williams College.

The Conference will be concerned with only one type of catalog—the alphabetical catalog of authors and titles—and the agenda will be limited to discussions of choice and form of entry words and headings. Questions included in the agenda relate to those aspects of cataloging practice that represent marked variations under different cataloging systems. A preliminary meeting held in London, July 19-25, 1959, laid plans for this Conference and proposed the following items for discussion: function of the main entry, choice of main entry, personal authors, corporate authors, title entries and form headings.

Librarians, especially catalogers, all over the world are looking forward to this 1961 meeting, which promises to be on very fruitful ground for future cooperation toward international standardization of cataloging rules. Information may be obtained from the Executive Secretary, A. H. Chaplin, c/o The National Central Library, Malet Place, London, W. C. 1, England.

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LIBRARY CAREER BOOKLET

The Library Club of Cleveland and Vicinity has prepared a brochure for the Occupational Planning Committee of the Cleveland Welfare Federation, *Careers in Today's Libraries*. Although slanted towards libraries in Cleveland, this is a lively, generously illustrated booklet that should be helpful in library recruitment programs anywhere.

Modification of Dewey For a Business Library

MRS. SUZANNA LENGYEL, Cataloger

Union Carbide Corporation Business Library, New York City

AFTER THE UNION Carbide Corporation Business Library realized that in a collection of business, economics and management books, the majority of the collection falls into the sections 330 (economics) and 650 (business and business methods) of the Dewey Decimal Classification, this classification was modified in the following way.

The entire section of 200's (originally religion) was used for books that would fall into the 330 group, and the entire section of 400's (originally language) was used for books that would fall into the 650 group. This accomplished two things. First, it expanded the area of classification numbers into the entire range of possibilities from 0 to 999, instead of crowding everything into a few sections and leaving several other sections of hundreds completely unused. Second, it provided 100-unit sections (200 to 299 and 400 to 499) for two sections that are allotted only ten units (330 to 339 and 650 to 659) in the Dewey Classification. This made possible a more detailed breakdown without using longer numbers than Dewey does.

A list of classification numbers for the primary breakdown of both sections concerned follows this description: The modification principle is quite simple: in the 330's, the number 2 is substituted for 33; in the 650's, the number 4 is substituted for 65. In both cases, the decimal point is brought to the right, and the entire number is shortened by one digit. For example, 331.155 becomes 211.55, 657 becomes 470 and 658.01 becomes 480.1.

In case the library receives books that fall into one of these two sections (200's and 400's), they are treated in the following manner. For the 200's (religion books rarely come to a business library), an arbitrary number is assigned from elsewhere in the

classification. For the 400's (dictionaries, grammars, language textbooks) the numbers are transferred into the 800's (literature) by simply changing number 4 to 8. This solution does not cause any real conflict because both sections (400's and 800's) are identical in their language subdivision and a business library has, by the nature of its collection, almost no literature material.

Modified Classification

ECONOMICS

- 200 Economics
- 210 Labor economics
- 220 Financial economics
- 230 Land economics
- 240 Cooperation and cooperatives
- 250 Economic ideologies
- 260 Public finance
- 270 Tariff policy
- 280 Industrial economics and production economics
- 290 Income and wealth

BUSINESS

- 400 Business and business methods
- 410 Office management
- 420 Writing
- 430 Shorthand
- 440 (not used)
- 450 Printing, publishing, bookbinding
- 460 (not used)
- 470 Accounting
- 480 Business and industrial management
- 490 Other topics in business (advertising, etc.)

A LIBRARY

Here is where people, one frequently finds,
Lower their voices and raise their minds.

Richard Armour

Classifications Schemes for Electronics and Data Processing

ELLIS MOUNT, Chief Librarian, ITT Federal Laboratories

Division of International Telephone and Telegraph Corporation, Nutley, New Jersey

THE LIBRARY of ITT Federal Laboratories has its collection centered in the fields of electronics, electrical engineering, physics and aviation, with related fields such as data processing and mathematics. In 1955 it was decided that existing classification schemes, including the one in use at the library at that time (Universal Decimal Classification), were not sufficiently up to date and that modifications would be made in certain fields in order to serve the library's purposes. Although several schemes were made up, this account will be concerned only with the electronics and data processing portions.

The collection of books consisted at that time of some 3,000 titles, and the goal was to prepare schemes that would serve for a much larger collection and be as current, technically, as possible. After considering the Library of Congress and Universal Decimal Classifications, it was decided to modify the Dewey Classification. There were several reasons for this decision. One was that it would be necessary to have the older books left with their existing classification markings for a considerable time due to lack of time to recatalog them quickly. Another reason was the familiarity most of the library users had with Dewey during public library and college library experiences and hence their likelihood of feeling more at home in open stacks arranged according to Dewey. The UDC numbers in use would fit in better with new Dewey numbers than with Library of Congress markings during the period when recataloging would be going on.

Only classification schemes for the major subject interests or for minor areas where existing schemes were too inadequate for our purposes were prepared. Source material for the modifications included the schemes used for *Science Abstracts* as well as occasional

consultations with specialists in the company. At this point I feel obliged to advise such a project as this only for those with a fair degree of familiarity with the subject matter involved in order to avoid the many pitfalls that exist along the road to completed schemes. One ambiguous class definition can lead to recataloging many books later on.

One of our main goals was to have abundant room for expansion in the fields of electrical engineering and electronics, which their position in the existing Dewey schemes did not permit. The only solution that seemed practical was to take over several blocks of numbers. Since the library had almost no books in the classes 622, 623 and 624, it was decided to put the contents of these three classes into 626, which the 15th edition of Dewey had conveniently left vacant. The amount of condensation needed to accomplish this was of no consequence, since we expected little or no use of such fields, namely mining engineering, military engineering and structural engineering. This left us with 622 and 623 for electrical engineering and electronics and with 624 for a grouping that included data processing and navigation.

Although this solution is obviously not practical for libraries with large holdings in the classes involved, it did suit our needs nicely. The schemes are modern and allow abundant room for additions as new fields of development in these subjects come to light. The numbers were considerably shorter than a similar amount of detail recorded in a conventional Dewey system. During the past five years since the first editions of the schemes were prepared, there have been no cases where expansion was not a simple matter, even though the collection had nearly tripled.

The use of Cutter numbers and author letters was also instituted at the same time as

the new classification numbers, and this was found to make retrieval and shelving considerably easier than the previous system in which only UDC numbers were used.

Two examples of selections from the schemes may be useful to indicate their degree of detail.

Radio Expansion

- 623.6 Radio
 - .61 Radio propagation phenomena. Reception. Interference. Noise
 - .612 Tropospheric propagation
 - .613 Ionospheric propagation
 - .614 Scatter propagation
- 623.62 Radio apparatus in general
 - .621 Radio applications in general
 - .622 Mobile and vehicular applications
 - .623 Marine applications
 - .625 Aeronautical applications
 - .626 Astronautical applications
- .63 Radio transmitters
- .64 Radio receivers
- .65 Radio antennas

Data Processing Expansion

- 624.25 Electronic computers
 - .26 Electronic analog computers
 - .27 Electronic digital computers
 - .28 Computer programing
- .3 Data processing by machines, computers, etc.
 - .31 Business data processing by machines, computers, etc.
 - .32 Literature and language processing by machines, computers, etc.
 - .321 Machine translation of languages
 - .322 Machine searching of literature

Additions made to the original schemes since 1955 were included in the second edition, prepared in 1961. Copies of the second edition are available from the SLA Loan Collection of Classification Schemes and Subject Heading Lists at Western Reserve University, School of Library Science, Cleveland 6, Ohio.

SPOTTED

● Whether the event will be recorded in library or crime annals is still a moot question, but there is no doubt that the collaboration between the police and librarian Harold L. Roth, of East Orange, New Jersey, to coerce negligent book borrowers into returning volumes to the public library has made the general public aware of the seriousness of the overdue book problem. Librarians everywhere are reporting that books they never expected to see again are coming back. ● At the St. Louis Public Library a book collector was told by a distraught mother to look in a little red wagon in the basement. "Find yours if you can," she said. "The children were playing bookmobile, and that's what they collected in the neighborhood." The collector left with an armful of missing books from both the city and county library. ● Sometimes, however, the customer is right, as in the case of a boy who insisted that he had never borrowed a book entitled "Augusta Sees A Squirrel." It turned out that the overdue cards were made from information spoken into a dictating machine, and the clerk misunderstood the correct title, "Augustus Caesar's World." ● The November issue of "Harper's Bazaar" carried an advertisement showing a pair of lady's feet shod in slippers next to a golden figure of Buddha. All was well until a copy of the magazine reached the U. S. Information Agency library in Rangoon where the ad suddenly provoked a furious outburst. Not only do the Buddhists of Burma regard the feet as the most unworthy part of the body but they also remove their shoes when entering a room containing a Buddha figure, and furthermore statues of Buddha are always placed well above the floor. The newspapers in Rangoon, several Buddhist groups and political organizations picked up the story of the supposed sacrilege and reproduced the ad with bitter comments. However, the newspaper editors were impressed by the fact that the USIA librarian let them borrow the controversial issue, even though he knew why they wanted it. Subsequently they remarked that his action proved to them that there really is freedom of the press in the United States.

Geography and Map Cataloging and Classification in Libraries

DR. ARCH C. GERLACH, Chief, Map Division
Library of Congress, Washington, D. C.

IN 1952 THE International Geographical Union established a Commission on the Classification of Geographical Books and Maps in Libraries. One member was named from each of five countries (Brazil, France, Germany, Italy and the United States). The chairman is Professor André Libault of France, and the United States member is the author of this article. Following the death of the Brazilian member, Dr. B. Winid of the Polish Academy of Sciences was added to the Commission, which also has corresponding members in several countries. The primary purpose of this Commission was to study classification systems for geographical and cartographical collections with a view toward recommending improvements and possibly even developing an ideal system for those materials. Because of the Commission's narrow scope, it has had only partial success in achieving recognition for geography as a discipline or identification of its works as such in the collections of large libraries.

The basic difficulty appears to be that librarians have had too little contact with modern geography to recognize works in this field when they see them, and too little understanding of maps to give them the attention they deserve as sources of information. It seems futile, therefore, to perfect further the classification schemes for geographical and cartographical materials until something is done to stop the routing of maps into storage bins and the cataloging of works prepared by eminent geographers, primarily for use by geographers, as anthropology, economics, geology, history, political science, sociology or some other subject with which the cataloger associates them. We must take into account the broader aspects of de-

scriptive and subject cataloging that are short circuiting geographical and cartographical publications.

Classification Considerations

The function of classifying a particular item in a collection involves only the assignment of a notation or call number to designate its logical filing position within a group of related materials. The notation may be numerals, letters or a combination of numerals and letters. It is the basic philosophy of the classification system, however, which determines how different groups of materials will be arranged in relation to each other and what types of subdivisions may be made within the groups. For example, one system might group materials by subject, then subdivide them by areas. Another might group materials by areas, then subdivide them by subjects. Or, to take a more limited example, one might classify works on military geography adjacent to political geography in one system and to physical geography in another. But what becomes of the work on military geography when the librarian identifies it as military science? It is classified as military science and separated from geography.

Unfortunately for geographical and cartographical research in libraries, the widest used classification systems do not treat geography as an independent discipline or facilitate the grouping of geographical materials together. Members of the International Geographical Union's Commission on Classification realize that long established and widely used classification systems for large general libraries, such as the Dewey Decimal or Library of Congress systems, are frozen into existing patterns by the tremendous mass of material already classified. Geographers and cartographers may, however, work toward

Revision of a paper presented at the XIX International Geographical Congress in Stockholm, August 1960.

the establishment of alternative schedules for use in special geography and map libraries.

Such an alternative arrangement has been provided in connection with the 16th edition of the *Dewey Decimal Classification*, which was published in the United States in 1958 and is supplemented or expanded from time to time by issues of *Decimal Classification Additions, Notes, and Decisions*. The 16th edition of the *Dewey Decimal Classification* has incorporated a number of geographical topics proposed by Dr. Meynen, but the basic arrangement subdivides subjects into local or geographical areas by affixing to the number for the subject the digits 09 followed by the number of the country, state, city and so on. The editors realize that many subjects are treated according to various regions of the earth that cannot be identified by the 940-999 sequence and have recognized some of these in the 16th edition through form division 091—zones and physical regions. They are considering the possibility of a regional subdivision scheme similar to that used by the *British National Bibliography*: continents, islands, mountains, plains, coasts, oceans, lakes, rivers, forests, grasslands, deserts and so on.

More important, however, is the recognition that geographers would like to have all, or nearly all material of a geographical nature kept together in one part of the *Dewey Decimal Classification*. To enable such an arrangement in special libraries there is provided in the March 1960 issue of *Decimal Classification Additions, Notes, and Decisions*, an expansion of 910.1 for topical geography. Libraries wishing to keep works on all fields of geography together may divide 910.1 like 000-899; for example, economic geography 910.133 or physical geography 910.155 14. If desired, area subdivisions may be added after a zero, as between 940 and 999; for example, economic geography of the United States, 910.133 073 or physical geography of the United States, 910.155 140 73.

If similar alternative schedules for geographical and cartographical publications can be inserted into other classification systems, real progress will be made toward organizing

branch libraries and specialized card catalogs for research in those fields. Working out more detailed plans of classification without taking into account the training and judgment of catalogers may, however, be about as ineffective as plotting the precise distribution pattern for irrigation water over field A and leaving the cataloger in control of the master valve through which the water may be channeled into fields B, C, D or X. The basic problem is how to gain recognition for geographical and cartographical works together rather than how to classify the small percentage so identified by subject catalogers.

Cataloging Considerations

The principles and techniques of cataloging as presented in the *Rules for Descriptive Cataloging in the Library of Congress* (page 7) state: "The objectives of descriptive cataloging are: 1) to state the significant features of an item with the purpose of distinguishing it from other items and describing its scope, contents and bibliographic relation to other items; and 2) to present these data in an entry which can be integrated with entries for other items in the catalog and which will respond best to the interest of most users of the catalog. . . . The descriptive elements are given in the entry in the order that will best meet the needs of users of the catalog and will facilitate the integration of the entry in a catalog with entries for other items."

Careful analysis of this statement reveals three areas of interpretation that cause difficulty for geographers. First, most users of library catalogs are not geographers, so when the cataloger scatters geographical works among a wide variety of other disciplines to which they do bear some overlapping relationship, he can conscientiously maintain that the entry "will best respond to the interests of most users of the catalog." Second, whenever there is a conflict between the requirement for presentation of data in an entry "that will best meet the needs of users" and the requirement for an entry which "can be integrated in a catalog with entries for other items," the latter principle is given priority. The catalog is the thing! Entries cannot be modified to fit different disciplines. They must conform to the standards that will ex-

pedite their integration into the catalog. Third, the subject cataloger analyses the content of items cataloged. This requires some knowledge of the subject fields as well as the principles and techniques of cataloging. Practically no catalogers have formal training in geography at the college or university level. How, then, can catalogers recognize and identify geographical works? They can't. A multitude of doctoral dissertations in geography and monographs or books written by past-presidents of the Association of American Geographers may be found cataloged in subject fields quite foreign to the authors.

To prevent the continuation of such a situation, the International Geographical Union's Commission on Classification should prepare a semi-popular, descriptive summary of modern geography for distribution to library schools. The resultant document could be distributed to library school administrators with a covering letter urging that it be made required reading for all students working toward degrees in library science.

Another report should be compiled and distributed to library associations and the principal libraries in each country, explaining and justifying in detail the need for alternate rules of entry for specialized collections, classed card catalogs and libraries wishing to keep works on all fields of geography together, subdivided by subject and area or area and subject.

Problems of Maps

Alternate rules of entry are even more essential for maps and atlases than for books, because readers in those fields characteristically approach the catalog or map files to find materials by area and subject. The American Library Association and the Library of Congress rules for entry are based on the supposition that maps should be cataloged like books. The main entry for books is author-title. More than 95 per cent of map reference requests require searching by area-subject entries. A survey of 360 map libraries in the United States, made by a committee of the SLA Geography and Map Division in 1953, revealed that 74 per cent of the requests were by area, 24 per cent by subject

and a few scattered ones were by title, publisher, scale or date.

Clearly the objective of a catalog is to identify each item in a collection, but for whom? The author-title entry for books is a useful approach for catalogers and acquisitions personnel but not for map reference use, so alternate rules of entry must be provided for control over map reference collections. A map lies in character between a book and a picture and combines some features of both. The main entry for cataloging maps should begin with geographical area, followed by subject, date, size or scale, publisher or authority, and notes on edition, series, number of sheets and classification number. The main entry heading should be one that can be applied to every kind of map and one that is useful in the information it provides.

The earliest map catalog printed in America (Harvard University, 1831) was arranged by area, with map titles listed alphabetically under areas. The printed map catalogs of the British Museum have followed an area arrangement since 1885. A concerted effort to convince library administrators that special provisions can be made for servicing special form and subject materials without disrupting the general collections and catalogs seems both essential and fully justified.

Future Objectives

The scope and objectives of the International Geographical Union's Commission on Classification should be broadened to deal with a wide variety of problems such as: 1) gaining recognition in libraries for geography as a discipline; 2) promoting more use of geographical and cartographical publications; 3) development of better bibliographic tools; 4) preparation of effective exhibits to strengthen public recognition of work in these fields; 5) improvement of research and publication standards; and 6) monitoring the cataloging and classification of geographic and cartographic publications in libraries. The Commission could inspect at frequent intervals the cataloging and classification of new acquisitions in selected major libraries and protest promptly and vigorously all im-

proper identification of geographical and cartographical works. This monitoring function might even be extended to solicit the protests of authors and publishers when their works are improperly cataloged in other fields.

To meet the requirements of rapidly growing geography and map libraries throughout the world, two basic objectives must be achieved: 1) librarians should be better acquainted with modern geography; and 2)

alternate schedules of classification for geographical and cartographical works, like the one for the new 16th edition of the *Dewey Decimal Classification*, should be created and put into use. In short, detailed classification of geographical and cartographical works is futile unless library philosophies and procedures can be broadened to recognize and provide for the selection, organization, evaluation and utilization of such works to serve specialists in those fields.

Joint Libraries Committee on Fair Use in Photocopying: Report on Single Copies

Introduction

The Joint Libraries Committee on Fair Use in Photocopying was organized after the Association of Research Libraries had resolved in January 1957 to lay on the table a proposed policy statement prepared by the ARL Committee on Photocopying of Copyright Material (the "David Committee"). The David Committee had recommended that the question of library duplication be referred to the Joint Committee, which consists of one representative from each of the following: the Association of Research Libraries (ARL), the Special Libraries Association (SLA), the American Library Association (ALA) and the American Association of Law Libraries (AALL). Representatives of the Council on Library Resources, Inc. and of the Library of Congress (Copyright Office) serve as consultants.

The present members of the Committee are Edward G. Freehafer, Chairman, representing ARL; Richard E. Chapin, representing ALA; Chester M. Lewis, representing SLA; and Julius Marke, representing AALL. Verner W. Clapp, President, Council on Library Resources, Inc., and Abe A. Goldman, Chief of Research, Copyright Office, have participated as consultants. The late Arthur Fisher, Register of Copyrights, served as a consultant until his death in November 1960. Messrs. Webster Sheffield Fleischmann Hitchcock & Chrystie have served as counsel, and Mr. Clapp has kept the minutes.

In May 1959 the Committee received a grant from the Council on Library Resources, Inc.

The Committee has studied past attempts to define the position of libraries faced with a demand for reproduction of material in their collection, including:

1. The "Gentlemen's Agreement" of 1935 reproduced in the *Journal of Documentary Reproduction* (vol. 2, March 1939, p. 29-36) and the negotiations leading up to it.
2. The "Reproduction of Materials Code" prepared by Keyes D. Metcalf and adopted by the ARL and adopted by the ALA Council in 1940.
3. The David Committee proposals.

Several helpful articles have been studied; e.g., Study No. 10 in the General Revision of the Copyright Law, *Fair Use of Copyrighted Works* by Alan Latman, and Study No. 19, *Photoduplication of Copyrighted Material by Libraries* by Borge Varmer. The Committee and counsel examined Mr. Varmer's study before publication; the comments of the Chairman are reported in an Appendix to the Study published by the Copyright Office.

Approach

With a view to the question of fair use, the Committee conducted studies in two general areas—one of library practices, the other of demand. Counsel for the Committee has reviewed the legal issues and participated

in the factual studies. On the basis of its findings and the opinion of counsel, the Committee is now in a position to recommend a Statement of Policy. Counsel's opinion is reproduced as Appendix A to this Report, and a summary of the results of the Committee's studies is given in Appendix B.

Studies of Library Practice

Library practices were surveyed at three government libraries, three public libraries and four university libraries. Of these ten, five were studied in March 1959 and five in December 1959. Each reported, for a period of from one day to three months, orders for copies by subject matter and type of work copied, source of order, place and date of publication and copyright status.

Studies of Research Demand

The first study of library practices indicated that The New York Public Library duplicating service offered the optimum in volume and diversity of demand, and NYPL was therefore selected as the principal location for intensive study. The services of NYPL employees were made available; a contract was entered into with Service Bureau Corporation (an IBM subsidiary); and a detailed punch card study of NYPL duplicating demand was conducted under the supervision of counsel in the spring of 1960 covering orders received in December 1959. At the same time, the December 1959 extension of the library practices study was conducted at five libraries. From this group, Princeton (Firestone Memorial Library) and from the first group, the University of Chicago (Harper Memorial Library), were selected for more detailed study to check the representative nature of NYPL demand and to determine whether any significant variations from the NYPL study existed at libraries with collections less heavily concentrated in technical fields. Orders received at each library during the last three months of 1960 and, in addition, those received at Chicago during December 1959, were studied.

Conclusions Drawn From the Studies

The studies establish that in meeting research demand the participating libraries do

not adjust, and indeed are incapable of adjusting, their duplicating services to the complexities of copyright law and status and that each library attempts to satisfy what it considers legitimate research demand. It is clear from the Committee's studies that the various codes and agreements heretofore proposed or adopted do not affect or reflect actual practice. Demand for copies is shown by the studies to be widely dispersed. The demand cannot be correlated with copyright status or with the advertising policies of publishers. Any economic damage to publishers or copyright owners through library duplication appears to be theoretical in view of the number of pages, dates of publication and variety of demand, revealed by the studies. The heavy corporate and institutional demand, which the studies show to be widely dispersed, negates any likelihood that demand for research photocopies is affected by costs.

Findings of the Committee

1. The making of a single copy by a library is a direct and natural extension of traditional library service.
2. Such service, employing modern copying methods, has become essential.
3. The present demand can be satisfied without inflicting measurable damage on publishers and copyright owners.
4. Improved copying processes will not materially affect the demand for single copy library duplication for research purposes.

Recommended Policy

The Committee recommends that it be library policy to fill an order for a single photocopy of any published work or any part thereof.

EDWARD G. FREEHAFFER, Chairman,
representing Association of
Research Libraries

RICHARD E. CHAPIN, representing
American Library Association

CHESTER M. LEWIS, representing
Special Libraries Association

JULIUS MARKE, representing
American Association of Law Libraries

March 17, 1961

Appendix A: Counsel Opinion

March 17, 1961

Mr. Edward G. Freehafer, Chairman
Joint Libraries Committee on Fair
Use in Photocopying

Dear Mr. Freehafer:

Since February 1959 Mr. Webster and Mr. Hogeland of this firm have been meeting with your Committee to study the problems of libraries represented by the Committee in responding to requests for copies of books and other publications and parts thereof. We have participated with the Committee in the planning and supervision of the factual investigations described in the Committee's Report of March 17, 1961, and in the writing of the Report. We have also investigated Copyright law, including the doctrine of Fair Use, and have reviewed previous efforts to formulate rules for libraries asked to supply copies of published material in their collections.

On the basis of the facts stated in the Report and our discussions with the Committee we have concluded that the granting of a reader's request for a single copy of such material is so clearly a direct and natural and necessary incident of ordinary library service and practice as to raise no serious question of copyright infringement. Accordingly, we concur in the recommendation of the Committee.

You will observe that this opinion, like the Committee's recommendation, is limited to single copy reproduction, respecting which there is present need for a clearcut workable policy that will not involve librarians in technical legal questions and procedures; neither the recommendation nor the opinion deals with problems of multiple copying, the proper solution of which may depend on professional legal consideration of particular cases.

Yours respectfully,

WEBSTER SHEFFIELD FLEISCHMANN
HITCHCOCK & CHRYSTIE
Attorneys and Counsellors at Law
One Rockefeller Plaza, New York 20, N. Y.

Appendix B: Summary of Committee Studies

I. Library Practices

The Committee studied the copying done at five libraries in March 1959 and at five different libraries in December 1959. The March surveys were conducted at the Harper Memorial Library of the University of Chicago, the United States Department of Agriculture Library, the Library of Congress, the National Library of Medicine and The New York Public Library, Astor, Lenox and Tilden Foundations. The December surveys were conducted at the Free Library of Philadelphia, the Firestone Memorial Library at Princeton University, the Los Angeles Public Library, the Library of the University of California at Berkeley and the Libraries of the Massachusetts Institute of

Technology. Of these, only the Library of Congress was able to give reliable information as to how much of the material affected by requests for copies was copyrighted.

A majority of the orders filled at each library surveyed, with the exception of the Harper Library at Chicago and the Firestone Library at Princeton, were requests for copies of works in the scientific and technical fields. A majority of the works copied at government libraries were reported to be foreign publications, and a majority of works copied at university and public libraries were reported to be domestic publications.

Although certain libraries reported that a majority of requests were received from individuals, a heavy majority of all copying reported by the libraries participating in the surveys was done at the request of corporate and other institutional users. A notable exception to the composite result was reported at Princeton, where approximately three-fifths of the requests received during the survey period were from individuals.

Each library surveyed reported substantially more copying from periodicals than from books, and with the exception of the Library of Congress, the Harper Memorial Library at Chicago and the Firestone Memorial Library at Princeton, each reported more copying from periodicals than from all other works combined. Orders were filled at each library surveyed without regard to the date of publication, and a composite majority of the works copied had been published within ten years of the date on which the copy was made.

II. Demand for Copies

On the basis of the information obtained in the studies of library practices, the Committee, working with representatives of Service Bureau Corporation (an IBM subsidiary), prepared the data contents sheet for a detailed punch card study at The New York Public Library. . . .*

After completing study and analysis of the IBM punch card study at The New York Public Library, the Committee resolved to conduct surveys in depth at the University of Chicago and at Princeton University for the purpose of determining whether the punch card results were sufficiently representative of library practice to be considered definitive. The earlier survey of the library practices had shown that the majority of the copying done at Chicago and Princeton involved publications other than those in the scientific and technical fields, whereas the material copied at The New York Public Library was preponderantly in scientific and technical fields. There follows a comparison of the results of The New York Public

* EDITOR'S NOTE: The detailed explanation of the data sheet with the percentage distributions of material copied has been omitted from this published report, but copies will be sent to readers who request them.

PUBLICATION DATE OF MATERIAL COPIED

	NYPL	Princeton	Chicago
Percentage published in 20th Century	91.0	83.7	95.1
Percentage published within ten years	57.9	47.4	37.0
Percentage published within one year	13.3	2.5	6.0

NUMBER OF PAGES PER REQUEST

	NYPL	Princeton	Chicago*
Percentage less than 20 pages	90.5	86.9	67.5
Percentage less than ten pages	73.0	69.7	44.5
Percentage less than five pages	45.0	no data	21.5

(* excluding theses)

KIND OF MATERIAL COPIED

	NYPL	Princeton	Chicago
Books	5.4	25.8	17.0
Periodicals	92.1	49.8	71.9
Maps	0.2	5.1	—
Music Text	0.05	—	—
Music Notation	0.3	—	—
Manuscripts	0.3	14.2	—
Prints, Pictures	—	—	—
and Illustrations	0.55	5.1	—
Theses	—	—	11.1

orders and quick copy orders, indicates that nearly 75 per cent of the orders are received from large corporations. The corporate orders in this sample were dispersed over a total of 58 different three-place Dewey classifications. These classifications ranged from No. 020 to No. 745. This range excludes certain orders from publishing corporations and certain corporate specialties (e.g., Corning Museum) which involved material in the upper ranges of the Dewey classifications.

AT PRINCETON

Thirty-five of the 122 instances of copying from books involved the copying of ten or more pages, and in 30 of those cases the number of pages copied was 20 or more. However, 21 of the books from which 20 or more pages were copied were not copyrighted (primarily because of expiration of copyright).

Seventy-one of the 228 instances of copying from periodicals involved the copying of ten or more pages, including 16 instances of copying 20 or more pages.

None of the instances of copying ten or more pages involved a periodical carrying more than incidental advertising. Only 15 of all the 228 instances of copying from periodicals involved periodicals carrying advertising.

Thirty-five (about half) of the instances of copying ten or more pages from a periodical involved periodicals published within the past ten years. Only five of the instances of copying 20 or more pages from a periodical involved periodicals published within the last ten years.

AT CHICAGO

Over 55 per cent of all instances of copying 20 pages or more involved foreign publications

Over 70 per cent of all instances of copying 20 pages or more involved publications more than ten years old at the time the copy was made, and 17 per cent of all such instances involved publications over 60 years old.

Only 10 per cent of all instances of copying 20 pages or more involved domestic works published within ten years of the time the copy was made,

ORIGIN OF WORK COPIED

	NYPL	Princeton	Chicago
Domestic	54	60.8	60.3
Foreign	46	39.2	39.7

Library (punch card study) with the results of the studies in depth at Princeton and Chicago, together with specific information obtained from each study.

ADVERTISING

Less than 10 per cent of the material copied from at Princeton and Chicago carried important advertising. At The New York Public Library publications with important advertising of one kind or another accounted for 46 per cent of all requests, but over 80 per cent of such publications were at least one year old when the copies were requested, more than 70 per cent were at least two years old and more than 63 per cent were at least three years old. Over half (52.42 per cent) of the publications copied from which important advertising was carried and which were published within one year were of foreign origin. Accordingly, only 4.26 per cent of total copying was done from recent domestic publications with important advertising.

AT THE NEW YORK PUBLIC LIBRARY

A selected sample of approximately 25 per cent of the punch cards, properly weighted to compensate for the fact that a longer period of time was used for credit account orders than for cash

SPECIAL LIBRARIES

and there were no instances of such copying within one year of the time the copy was made.

Less than 10 per cent of requests were from individuals. Libraries and other educational institutions accounted for 74.6 per cent of all requests, corporations for 13.6 per cent, and government agencies 1.9 per cent.

General Comment

In terms of potential damage to copyright owners the significant difference between the demand at NYPL (with its emphasis on scientific and technical works) and at Princeton and Chicago appears in the tendency, particularly apparent at Chicago, for the user to request a substantial number of pages of the work being copied. This tendency is counterbalanced both in the general percentage figures and the more detailed Princeton and Chicago analyses by the fact that a substantially higher percentage of copying at Princeton and Chicago, again particularly marked at Chicago, involved material more than ten years old and that relatively few instances of copying of 20 or more pages in fact involved recent publications.

Other differences in demand at the two classes of library collections are the somewhat larger percentage of domestic publications copied at Princeton and Chicago and the substantially higher incidence of important advertising in the works copied at NYPL.

Representative Results

Detailed punch card studies have been made of the three domestic publishing houses whose publications were most frequently copied.

These three publishers are the only domestic publishers accounting for as much as 1 per cent of the material duplicated.

The most frequently copied from publisher is a learned society. None of its publications are copyrighted, although some of them do carry sections of advertising that are apparently important.

The second most frequently copied publisher is also a learned society, all of the publications of which are copyrighted. Nearly all carry substantial advertising. A total of nine different publications were copied from. Half of the publications copied from were over 12 years old. Less than 10 per cent had been published within the year preceding the duplication by the Library.

The third most frequently copied from publisher is a commercial publisher, all of whose publications are copyrighted. All carry advertising that is apparently important. A total of 22 different publications were copied from. Half of the orders involved publications published within six years of the date on which the copies were made; about 14 per cent involved publications published within one year of the date on which the copies were made.

MARCH 10, 1961

SUMMER COURSES AND WORKSHOP

COLUMBIA UNIVERSITY's School of Library Service will offer "Scientific and Technical Abstracting and Indexing" during the 1961 summer session, July 3-August 11. Requirements for admission are bachelor's degree, some professional experience and adequate scientific background. Write to School of Library Service, Columbia University, New York 27 for details.

The UNIVERSITY OF SOUTHERN CALIFORNIA workshop, "Implementation of New Standards for School Libraries," under the sponsorship of the School of Library Science, will be held, June 19-23, at the University in Los Angeles. The workshop will carry one semester credit unit and the cost will be \$27. For information write Dr. Martha Boaz, Dean, School of Library Science, University of Southern California, Los Angeles 7.

A course in theological bibliography by the GRADUATE LIBRARY SCHOOL AND THE DIVINITY SCHOOL OF THE UNIVERSITY OF CHICAGO is scheduled for the summer quarter, 1961. The course carries credit in both schools and is part of a recently initiated joint program in Theological Librarianship. The course, open to advanced students in theology or librarianship, will cover reference books, bibliographies and sources of information and evaluation, and it also will include some major works in the field of theology. The summer quarter begins on June 19. Application for admission should be made at least a month in advance. Write to the Dean, Graduate Library School, University of Chicago, Chicago 37, Illinois for information.

The TEXAS CHAPTER OF SLA, in cooperation with the UNIVERSITY OF TEXAS GRADUATE SCHOOL OF LIBRARY SCIENCE, will hold a graduate "Seminar in Special Libraries," June 13-August 17. Emphasis will be on scientific-technical and business-industrial libraries, and there will be visits to special libraries in Austin, Dallas, Houston and Baytown. The course will carry two semester credit hours toward the M.L.S. degree. Qualified non-degree candidates will be admitted as auditors. Write Dr. R. R. Douglass, Director of the School, Austin 12, Texas, for details.

CURRENT CONCENTRATES Of The Library World

Random Thoughts on LC Classifications

WHEN THE JUNE 1960 issue of *LC's Decimal Classification, Notes and Decisions* reached my desk recently, it amused me to deduce that a devotee of Caissa had joined the staff. The correctness of my deduction seemed verified when I later came across a game played in the Library of Congress Championship Tournament; *Chess Review* reported that D. H. Mugridge played the Albin Countergambit against Dr. S. Kuchеров and won brilliantly.

As I was saying, the June issue of *Decimal Classification* was very entertaining. Not only is the chess classification carried out to four decimals, but 796.33, Inflated Ball Driven by Foot, is carried out to six decimals, as is 796.357, Baseball.

Gumperson's Law, which explains why the most inconsequential publications require the most complicated cataloging, again proves its worth. How else can one explain that Magnetohydrodynamics Physics has a simple 538.6, and Baseball Gloves has 796.357078? Someone missed a fine opportunity, incidentally. A "see" reference from Baseball Mitts to Baseball Gloves should be used. Surely the two are different enough to justify separate numbers and "see also" references each way.

The clear thinking and fine, discriminating analysis that went into these classification expansions call for our admiration and ovals, even though we can't think of anyone who will ever use them. The established chess libraries have long since been classified, and I doubt that anyone would undertake to reclassify them all to a scheme that does not distinguish clearly between 794.152, Master Matches, and 794.159, Games by Individual Players.

LC being what it is, we all turn to it from time to time for guidance and downright help. LC printed catalog cards come to mind

immediately. A view that has won favorable consideration in many libraries, from the largest universities considering reclassification to the lone special librarian confronted with an uncataloged collection of a few thousand books, is to save time by accepting LC practices hook, line and sinker.

This appears very attractive. The classification is done by experts. The descriptive cataloging contains more than is needed, including odd notes and unnecessarily detailed collations. The subject headings have a quaintness to them that is strange to a technical library, but we can learn to live with them.

To catalog our few thousand books we decide to accept LC practices. There is no question but that the cataloger saves a tremendous amount of time and thought. The classification number is given most of the time. The descriptive cataloging is acceptable. The subject headings are tolerable. We must usually add only a few tracings and cards for added entries, corporate and series. The result is a well-cataloged collection everyone can use.

We survey the total effect. Alas, in next year's budget we must allow a good bit for reclassifying and the erasing and retyping that goes with it. Here are a few examples:

HF 5353	Hay, <i>Business Report Writing</i>
PE 1475	Trease, <i>Preparation of Scientific and Technical Papers</i>
PE 1478	Gaum, <i>Report Writing</i>
T 11	Dederich, <i>Communication of Technical Information</i>
	Kapp, <i>Presentation of Technical Information</i>

The amusing ASSHO's *Public Roads of the Past* is classified HE 341; other books on roads, TE 145. With little effort we could list books on nucleonics, computers, automation and many other topics which the LC classification scheme scatters throughout the library. We find ourselves spending much

more time trying to explain and justify these vagaries than it would have taken to make the effort to classify the books together in the first place.

This is no reflection on the LC team of classifiers. It takes little imagination to appreciate the amount of profound thought and gift for subtle distinction that went into these decisions. The books are classified in a scheme that is consistent within itself. But our collections are small and open, not large and closed, so special librarians must be more realistic.

Reprinted, with slight changes, from the SLA Southern Chapter *Bulletin*, September 1960, "Editorial Ramblings" by Ralph Hagedorn.

Three By Five

THREE BY FIVE FIXATION is the occupational disease of librarianship. So long as librarians and library patrons are beguiled by that highly touted Frankenstein, the dictionary card catalog, redundant cataloging will prevail. . . .

The futility of redundant cataloging has long been recognized. Commencing in 1850, one expert after another devised methods for expediting cataloging and eliminating unnecessary duplication of effort. The proffered solutions proved unacceptable. Nowadays, everybody knows what needs to be done and how to do it; simply issue a facsimile of a standard Library of Congress catalog card with every book published.

On behalf of the library profession and under the sponsorship of the Council on Library Resources, the Library of Congress recently endeavored to determine the feasibility and wisdom of printing a facsimile catalog entry on a front page of every book published. Having collaborated with publishers in a trial of prelude cataloging, the Library of Congress regretfully concludes "that neither a full nor a partial Cataloging-in-Source program is desirable." Furthermore, the Library of Congress recommends that "there should be no further experiments with Cataloging-in-Source."

This should not discourage librarians from striving to eradicate redundant cataloging. The cataloging of library books will eventu-

ally have to be done once and for all by a central agency. Perhaps the best solution is so obvious that no one has given it serious thought. Libraries subscribe to numerous periodicals, yet hardly anyone would waste time indexing and cataloging magazine articles. Periodical indexes to a comprehensive assortment of general, scientific and technical publications must suffice. Printed catalogs of books, similar to the Library of Congress and British Museum offerings have never gained a foothold simply because librarians have made a fetish of the dictionary card catalog. The public libraries of King County, Washington, and Los Angeles County, California, may yet lead the way, for they have found that the book catalog is admirably suited to the requirements of county library systems.

The dictionary card catalog is not obsolete but it should be. The cost of maintenance has become prohibitive. There is nothing more depressing than to imagine highly qualified librarians throughout the nation standing at catalog cases filing three by five cards. Furthermore, the card catalog cases themselves pre-empt too much space.

Card catalogs have only one attribute that the consolidated volumes of printed catalogs lack; they allow insertion of supplementary cards, an attribute that affords too much fruitless employment.

The failure of the "Cataloging-in-Source" proposal may be a blessing in the long run. It may hasten the demise of the three by five card. Had the experiment been affirmative, there probably could have been no actual reduction in cataloging costs. The results of a "Consumer Reaction Survey" clearly indicate this. Nearly every librarian was excited if not enthusiastic over "Cataloging-in-Source," knowing how much it would benefit "the other fellow." When asked how it would benefit *him*, however, the average librarian was not willing to commit himself "to immediate or radical procedural change." In other words, most librarians enjoyed all the attention their darling three by five cards were receiving, but few evinced any intention of capitalizing upon prelude cataloging.

Reprinted from *Wilson Library Bulletin*, January 1961, "Seasoned To Taste" by Harry C. Bauer.

This Works For Us . . .

Preparing Catalog Cards In the Library

Catalog card information is available at any of the Air Reduction Company libraries, even those at other locations, within a few days after an item has been cataloged in the central research library. Our card format and offset machine make this possible. One master, typed according to specifications, is prepared for each item cataloged. The wanted number of catalog cards are then reproduced directly from this master by means of a small offset machine.

In addition to the descriptive information and library location symbol, all subject headings and other entries are typed at the top of the master. Pre-cut offset paper plates, 3 x 5 inches in size, are used for typing the masters. The number of copies to be reproduced from the master is marked with pencil on the non-print margin of the master. This information is for the offset machine operator. The typed masters are then sent to the duplicating section as scheduled. Paper plates may be obtained from the Addressograph-Multigraph Corporation. They may also be

ordered cut to size from other suppliers of offset papers.

The wanted number of copies are reproduced on one hundred per cent rag content, light weight, hole-punched card stock, 3 x 5 inches in size. No further typing is necessary when they are returned to the cataloger. Only one typing and one proofreading are required to obtain any number of catalog cards. Elite type characters are used. Typing must be sharp and clean to obtain good copies.

The cataloger sorts the cards and indicates the filing point on each card that is to be filed in a card catalog. This is done by stamping a red arrow-head to the left of the entry. The Midget self-inking hand stamp with a 1/4 inch red arrow-head was made to order by the Kregel Manufacturing Company, New York, and costs \$4.75.

Finished cards are distributed for filing in card catalogs. Remaining cards are held for make-up in preparing an acquisitions list or are sent to individuals who have expressed an interest in a specific subject.

This offset machine method replaced the "Cardmaster" method that had been used

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|-----------------------------------|--|
| 1. Polymers and
polymerization | 3. Bohrer, J. J. |
| ➔2. Copolymerization | 4. Mark, H. |
| | 5. High polymers v.8 |
| 547.013 | ALFREY, T., BOHRER, J. J. and MARK, H. |
| A12c | Copolymerization. N. Y., Inter- |
| | science, c1952. 269p. (High |
| BB | polymers v.8) |
| MH | |



A Typical Catalog Card with Arrow Indicating Filing Point

previously. The same style catalog card had been manually reproduced by means of a small hand machine, the "Cardmaster" printer. Mimeograph stencils of postcard size were used for typing the masters.

In the "Cardmaster" method, the prepared stencil is attached to the printer on two sides, permitting it to cover an inked pad. By holding a handle, the assembly can be rolled easily over a blank 3 x 5 inch catalog card. Cards must be inserted into the base of the printer, one at a time. Care is required to obtain even print density through-

out on the catalog card. This can be obtained by properly controlling both the amount of pressure and the amount of ink used on the pad.

Any number of cards can be made from one master at little cost. A complete CARDMASTER outfit can be obtained for about \$30 from the Cardmaster Company, 1920 Sunnyside Ave., Chicago 40, Illinois.

LORETTA J. KIERSKY, Librarian
Air Reduction Company, Inc.
Murray Hill, New Jersey

Association News

SLA President Assumes New Position

Winifred Sewell, 1960-61 SLA President and Librarian at Squibb Institute for Medical Research, New Brunswick, New Jersey, for the past 15 years, joined the staff of the Index Division of the National Library of Medicine as Subject Heading Specialist on May 1. In this capacity Miss Sewell will be responsible for the conversion of the present subject structure used in the *Index Medicus* and the *NLM Catalog* to the future system to be employed in the Library's projected Medical Literature Analysis and Retrieval System (MEDLARS).

Staff Resignation

Kathryn E. Smith, Assistant to the Executive Secretary, resigned on April 15. Miss Smith joined the Association's professional staff in May 1955 and has been primarily responsible for managing and developing the Placement Service. In this capacity she has worked closely with employers, many individual members and Chapter Employment Chairmen. After a short vacation Miss Smith will seek a personnel or placement position in another organization.

John Cotton Dana Lectures

As part of the Association's participation in National Library Week, three members presented John Cotton Dana Lectures to students in library schools in the United States. William S. Budington, Associate Librarian of the John Crerar Library in Chicago, spoke

on "Documentation and Libraries, with Special Reference to Special Libraries" at the GLS Club, a student-faculty organization of the Graduate Library School of the University of Chicago. Mrs. Irene M. Strieby, former Librarian at the Eli Lilly and Company, Indianapolis, talked on "Professional Responsibilities of the Special Librarian" at the Indiana University Library School. Mrs. Doris Banks, Librarian of the Hughes Aircraft Company, Fullerton, California, presented an illustrated lecture on "Cataloging Compromises in the Technical Library" at the School of Library Science of the University of Southern California.

Two more lectures were scheduled later in the spring. On April 26, Dr. F. E. McKenna, Supervisor of the Information Center at Air Reduction Company, Murray Hill, New Jersey, addressed the Library School at Pratt Institute on "Readin, Ritin and Reproducin: Tool for *Special Librarians*." Mrs. Martha Jane Zachert, Librarian at the H. Custer Naylor Library of the Southern College of Pharmacy, Atlanta, Georgia, lectured on "Library Standards with Emphasis on Special Libraries" to the library students of Emory University on May 11. A sixth lecture is being planned at the Graduate School of Library Service of Drexel Institute of Technology in Philadelphia for the early fall at which Gretchen Little, Librarian, Atlas Powder Company, Wilmington, will speak on "Putting Knowledge to Work." A seventh was given earlier in February by Katharine L.

Kinder at Rutgers University Graduate School of Library Service.

Education Committee

Grieg Aspnes, Research Librarian, Cargill, Inc., Minneapolis, has accepted the Chairmanship of the new Education Committee authorized by the Board at its Midwinter Meeting. The Committee will study and investigate the backgrounds and interests of those presently available for special library

training, special courses or approaches needed, ways of bolstering the regular library school programs and the type of staff that should teach special librarianship.

CNLA Meeting

Bill M. Woods, Executive Secretary, and Mrs. Margaret H. Fuller, a Past-President, represented the Association on May 2 at the spring meeting of CNLA in New York City.

SLA Sustaining Members

The following organizations have expressed their interest in supporting the activities and objectives of the Special Libraries Association by becoming Sustaining Members for 1961. These are additions to the 106 Sustaining Members listed in previous 1961 issues of *Special Libraries*.

WALTER J. JOHNSON, INC., New York, New York
STANDARD OIL COMPANY (NEW JERSEY), New York, New York
TEXAS GAS TRANSMISSION CORPORATION, Owensboro, Kentucky
ZEITLIN & VER BRUGGE, Los Angeles, California

EDITOR'S NOTE: This list includes all applications received through April 14, 1961. Supplements will appear in future issues.

Coming Events

The 80th annual Conference of the AMERICAN LIBRARY ASSOCIATION will be held in Cleveland, Ohio, July 9-15. The theme is "Libraries for All," and the Conference, designed to alert the librarians to rapid changes taking place within the profession, will consist of three general sessions.

The American Association of Law Libraries will hold its fifth biennial LAW LIBRARIANS' INSTITUTE, June 19-23, at Harvard Law School, Langdell Hall, Cambridge, Massachusetts. The Institute is entitled "The Literature of the Law—Techniques of Access." Registration forms should be sent, before June 1, to Earl C. Borgeson, Director, Law Librarians' Institute, Harvard Law School Library, Langdell Hall, Cambridge 38, Massachusetts.

The following week, June 25-29, AALL will hold its ANNUAL MEETING, at the Sheraton Plaza Hotel in Boston. Audio-visual materials and processes, court records and briefs, Canadian legal research, insurance for li-

braries and weeding the law library collection are some of the subjects to be discussed. Write to Jean Ashman, Chairman, Committee on Publicity, Washington University Law Library, Saint Louis 30, Missouri, for information on either of the AALL meetings.

The Sixth SEMINAR ON THE ACQUISITION OF LATIN AMERICAN LIBRARY MATERIALS will be held at Southern Illinois University, in Carbondale, July 6 to 8, 1961. The Seminar will concern itself chiefly with problems related to the acquisition of library materials from Colombia and Venezuela, the problems of bibliographic information on Latin America and the progress made on previous Seminar recommendations. For general information concerning this and the previous Seminars consult Marietta Daniels, Secretary, at the Pan American Union, Washington 6, D. C., and for specific information on the Sixth Seminar write William A. Bark, Director, Latin American Institute, Southern Illinois University, Carbondale, Illinois.

52nd SLA Convention

General Sessions Speakers

Keynote Address



Lawrence Clark Powell, Librarian of the University of California at Los Angeles, and Dean, School of Library Service at that institution, will give the keynote address Monday morning, May 29. "Larry" Powell, author of some 16 books and numerous articles, Dean of the country's newest library school, Doctor of the University of Dijon, France, bookman, bibliophile, world traveler and lecturer, will speak on his philosophy of education for librarianship. In July 1961, Dr. Powell will relinquish the University librarianship to devote full time to the Library School whose first class will be graduating shortly after the SLA Convention.

Banquet Address

E. Finley Carter, President of Stanford Research Institute, Palo Alto, will deliver the banquet address Wednesday evening, May 31. Mr. Carter joined Stanford Research Institute in 1954 as Manager of Research Operations after many years of association with Sylvania Electric Products, Inc. The decentralized and multiple-plant operations pioneered by Sylvania with great success were largely Mr. Carter's formulation. A holder of some 20 patents in telecommunication, and therefore an electrical engineer in his own right, Mr. Carter is also a pioneer in the field of human relations in industry. He was Director of Industrial Relations for Sylvania before assuming his first duties at SRI.



A. Falck Jepsen

Author Address

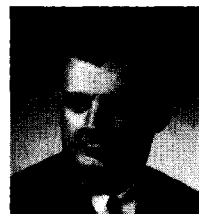


S. I. Hayakawa, well-known author and educator, who has specialized in the semantics of communication, will address a meeting Tuesday afternoon, May 30, which is sponsored by the Southern California Chapter of SLA. This meeting will be open to the general membership. Dr. Hayakawa, presently on the faculty of San Francisco State College, is widely known for his *Language in Action* and its later edition *Language in Thought and Action*. Since 1943 he has edited *ETC.: A Review of General Semantics*. He has contributed to the *Middle English Dictionary*, *New Republic*, *Poetry*, *Harpers* and *Public Opinion Quarterly* and held visiting professorships at a number of American colleges and universities.

Lafayette Studio

General Session Panel

Paul R. Johnson will moderate the panel at the general session on Tuesday morning, May 30. Mr. Johnson is Coordinator of Case Gathering for the Stanford University Graduate School of Business. He has prepared three cases in the area of relationship between library management and management. These are actual instances and have been handled in the same manner as cases which Mr. Johnson has written up while serving in a consulting capacity to national corporations operating in the San Francisco area. The results of case writing studies are frequently worked into the training programs of the firms which participate.

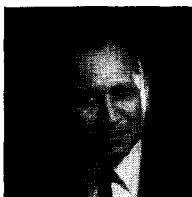


Division Panels and Speakers

Panel: National State of Technical Translation Program

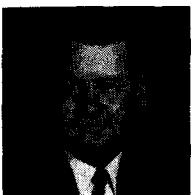
Monday Afternoon, May 29

Science-Technology Division



Fabian Bachrach

He will discuss procedures of selection and evaluation, contacts with Soviet scientists, editors and government officials and the "simultaneous publication program" of Soviet conference proceedings in both Russian and English. Mr. Coleman attended CCNY and Columbia University. For a time he was a professional writer.



George L. Seielstad is Supervisor of the Technical Reports Group at the Applied Physics Laboratory, a division of The Johns Hopkins University. He will present a paper on "A Translation Program in a Center of Research" and outline the problems with some suggested solutions. Mr. Seielstad was Teaching Fellow in English at Washington State College for two years, after receiving his degree from Albion College in 1937. In 1946, after six years of military service, he joined the Applied Physics Laboratory. Mr. Seielstad is a Lieutenant Colonel in the United States Army Reserve (Chemical Corps)

and Chairman of the AAAS Conference on Scientific Communication.

Paul S. Feinstein is Acting Program Director for the Foreign Science Information Program of the National Science Foundation. He will discuss NSF's translation programs with technical societies and academic institutions. Mr. Feinstein holds a B.S. in chemistry from Eastern Kentucky State College; he has done graduate work at Duke University (1937-1940) and graduate work in library science at Catholic University of America (1951-1954). He has taught chemistry in Kentucky for seven years and from 1946 to 1958 was engaged in technical information work with the AEC.



Paul W. Howerton, Deputy Assistant Director of CIA, will present a paper "Technical Translations: Their Initiation, Production and Use." This will be a brief report on the state-of-the-art of machine translation. Mr. Howerton graduated from Northwestern University with honors in chemistry, mathematics and languages. He also studied at Indiana University and the University of Calcutta. Facile in most of the Slavic, Teutonic and Latin languages as well as Hindi, Mr. Howerton has authored over 300 publications, including patents, translations, papers on chemical literature and chemical abstracts from 11 languages.

Panel: Information Retrieval Systems for Small and Medium Size Libraries

Wednesday Morning, May 31

Science-Technology and Documentation Divisions

Paul R. Ackley, Head of the Machine Records Unit at Smith Kline & French Laboratories, Philadelphia, will talk about mechanization as an aid to scientific information handling. Mr. Ackley joined Smith Kline & French Laboratories as a junior pharmacologist after his graduation from Temple University in 1951 with a major in biological sciences. Before his present assignment, he served as a literature scientist. He is responsible for data reduction and machine retrieval through punched card techniques.

Saul Herner, of Herner and Company, Washington, D. C., will discuss the Heatwole Associates Magnetic Tape Searcher and Correlator. Holding degrees in biochemistry and library science, Mr. Herner founded his own company in 1956, after many years of consulting and research in library planning. He has served in the Science and Technology Division of the New York Public Library, in the libraries of New York University, Johns Hopkins University, United States Department of Agriculture library and with the library planning group of the Atlantic Research Corp.

Gerald Jahoda is Head of the Systems and Research Library of Esso Research and Engineering Company, Linden, New Jersey. His paper will be "Development of a Manual and Machine-Based Index to Internal Research and Engineering Problems." With a subject degree in chemistry, Mr. Jahoda also holds a doctorate in library science; his thesis topic was "Correlative Indexing Systems." He has taught courses in the use of chemical literature at the University of Wisconsin and at the Brooklyn Polytechnic Institute. He was also a panel member at the 1958 International Conference on Scientific Information.



Fred R. Whaley joined the Linde Company, a Division of Union Carbide, in 1936. He is now Supervisor of Technical Information Services for its Tonawanda Laboratories in New York. Mr. Whaley was granted a Ph.D.

in chemistry from Johns Hopkins in 1932 and taught chemistry before he began his career with the Linde Company. Since 1954 he has transferred his main attention from laboratory research to scientific information problems. His paper will be "The Use of a Collator in an Inverted File Index." It is based on innovations he has introduced into library services at Tonawanda.

Problems of Metropolitan Areas

Wednesday Afternoon, May 31

Transportation, Business & Finance, Geography & Map and Social Science Divisions



M. Justin Herman, Executive Director of the San Francisco Redevelopment Agency, will speak on "Urban Renewal and the Better Urban Life." Mr. Herman, a graduate of the University of Rochester and the Har-

vard Graduate School of Business Administration, has 25 years of federal service as a community relations specialist, housing administrator, industrial relations officer, statistician and economist. Just before assuming his present duties, he was Regional Administrator of the Housing and Home Finance Agency, serving the Western states including Alaska, Hawaii and Guam.

Wolfgang S. Homburger

has been with the Institute of Transportation and Traffic Engineering of the University of California since 1955. His special field is traffic engineering and urban transportation. A member of the American Society of Civil Engineers and the Institute of Traffic Engineers, Mr. Homburger works with the latter's Technical Committee on Traffic Engineering References for whom he is preparing a basic bibliography in the field of traffic engineering. His paper is entitled "Rapid Transit Trends."



Advertising and Publishing Divisions

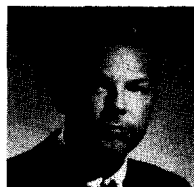


Robert K. Arnold is the luncheon speaker on May 31 down the peninsula at Palo Alto. An economist with the Economic Development Department of Stanford Research Institute, Mr. Arnold has conducted or assisted

with a wide variety of projects: commodity movements in the West, economic feasibility of nuclear-propelled vessels, transportation problems in the Philippines, location factors in Arizona and New Mexico for banking and industry, and diversification trends in industry. A major two-year study concerned the past

and future growth of California. Presently a Ph.D. candidate at the University of California, Mr. Arnold has taught there and at Antioch College.

James F. Bell is Research Manager of *Sunset Magazine*, where he directs studies of the western market—the people, their purchasing patterns and their interests in homes, food, travel and gardening. Mr. Bell will speak on "The California Market"



at the luncheon, May 31, after which Division

Elsie & Roland Wolfe

members will visit the Lane Publishing Company, publishers of *Sunset*. Mr. Bell was educated at Brentwood College, Victoria, British Columbia, The Phillips Exeter Academy, Princeton University and Whitman College. Before going to the Lane Publishing Company, he was in advertising and market research for six years with the Dole Corporation.

Mrs. Doris Saunders, Librarian, Johnson Publishing Company, Chicago, and President of the Illinois Chapter, will share the breakfast program on May 31.

Gordon Randall, Manager of the IBM Research Library at Yorktown Heights, New York, will be a speaker at the workshop on "Library Equipment and Its Application" at breakfast, Wednesday, May 31. He will speak on standard library equipment, with emphasis on steel shelving. Mr. Randall is the representative from SLA on the ASA Z-85 Committee on Library Equipment and Supplies.



Biological Sciences and Hospital Divisions



Radiation Laboratory

John W. Gofman will address the dinner meeting at Fisherman's Wharf on Tuesday evening, May 30. Dr. Gofman is a *doppeldoktor*, with a Ph.D. in chemistry and an M.D., both from the University of California. He is Professor of Medical Physics at the University of California Medical Center in San Francisco. Earlier work was done at Oberlin College and Western Reserve University. Dr. Gofman will speak on "Medical Physics Approaches in Heart Disease."

Harold S. Simon is the speaker at luncheon on June 1, when the Divisions will be on tour of the Stanford Medical Center and Library in Palo Alto. Dr. Simon is Assistant Professor in Medical Microbiology and Assistant Professor in Medicine at Stanford University. A graduate of Harvard Medical School, he interned in New York Hospital. In 1960 J. P. Lippincott published his book, *Attenuated Infection: The Germ Theory in Contemporary Perspective*, which will form the basis of his discussion Thursday.



Dr. Leo Kartman will address the luncheon gathering on Monday, May 29, on the subject of

"Plague—Past and Present." Dr. Kartman received his B.S. and M.S. from Wisconsin University and his Sc.D. from Johns Hopkins University in 1950. Much of his work has been in the fields of parasitology. He is now Senior Scientist with the United States Public Health Service at the San Francisco Field Station. Dr. Kartman is a Fellow of the Royal Society of Tropical Medicine and Hygiene.

The distinguished Dr. John Bertram deC. M. Saunders, Provost, The San Francisco Medical Center of the University of California, Dean of the Medical School, and University Librarian, will address the afternoon meeting of the Divisions on May 31. The subject of his address is "The Library in the Biological and Health Sciences." Dr. Saunders is a graduate of the University of Edinburgh (1925) and a Fellow of the Royal College of Surgeons, Edinburgh (1930). His first connection with the University of California was as a lecturer in medical history and bibliography (1933). A consistent contributor to publications in anatomy, clinical anatomy, medical education and the history of medicine, Dr. Saunders is also the author of four books: one on ancient Egyptian medicine, one on Leonardo da Vinci and two on Vesalius.



Business and Finance Division



Romaine

Dr. Robert S. Einzig, Vice-President of the Federal Reserve Bank of San Francisco, will participate in the panel, "The Economist and the Librarian," Wednesday morning. Dr. Einzig had served as instructor in economics at Wayne University and the University of Michigan and was a consult-

ing economist to industry before coming to the Federal Reserve Bank in 1952 as Financial Economist and later Assistant Vice-President. He was an instructor at the Seminar in Problems of Bank Management at the University of California from 1956-9. In his present position, Dr. Einzig has direct supervision over the research department and special responsibility for advising on system open market operations. He also is a frequent writer for various journals.

Insurance Division

Elmer W. Earl, Jr., Assistant Manager, Planning and Research, Life Office Management Association, New York City, will moderate the panel Wednesday afternoon, May 31, devoted to "The Special Librarian's Position in the Insurance Company's Salary Structure." Mr. Earl (Rutgers, 1930) spent seven years in the publishing business before becoming a life insurance agent. For 11 years he was in the Division of Personnel Administration of the National Industrial Conference Board. In 1953 he joined the Life Office Management Association; his special field is personnel administration.



Juliet Newman



Howard L. Martin, Dean, School of Business Administration, Golden Gate College, San Francisco, will address the Company Representatives' luncheon on May 29. Dean Martin pioneered chartered property and casualty underwriter education in the San Francisco area and has developed a full-degree program preparatory to the CPCU examinations. A graduate of the University of Vermont, he has also studied at Harvard University Graduate School and University of Montana. He is the author of several textbooks on general insurance, fire insurance and real estate in California, and of various articles.

Metals Division



Champion Studio

Fred J. Drewes, Vice-President of Kaiser Aluminum and Chemical Corporation, will address the luncheon in the Kaiser Center, Oakland, on May 31. Mr. Drewes, a Stanford graduate, joined the Permanente Metals Corporation (the precursor of Kaiser Aluminum) in 1942 at the Richmond, California, shipyards. From 1943 to 1947 he served as Administrative Assistant at the company's Washington, D. C. office. He was Assistant to the Vice-President and General Manager of Kaiser Aluminum and Chemical from 1951 to 1957, when he was named Administrative Manager. In his present capacity, he handles public affairs and advertising for the company.

John P. Nash, Director of Research of the Missiles and Space Division, Lockheed Aircraft Corporation, will greet the Metals Division on its tour of Lockheed, June 1. Dr. Nash holds a Ph.D. in mathematics from Rice Institute. He has taught at the University of Notre Dame and held research appointments at M.I.T. and the University of Illinois. He was editor of the ORDVAC maintenance manual and the ILLIAC programming manual. Dr. Nash has held consultant positions at Aberdeen Proving Ground, Maryland, and with the U.S. Army, Pacific Ocean Areas. Author of many papers, he is a consulting editor of the McGraw-Hill Series on Information Processing and Computers.



Lockheed

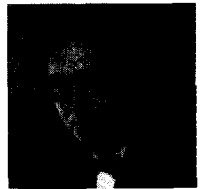
Information and the Scientist Panel

Science-Technology Division, Wednesday Afternoon, May 31



Dr. Paul D. Berry, who has a Ph.D. in psychology from Yale, will discuss the information problem from the professional societies' standpoint. Dr. Berry has been connected with Psychological Research Associates, Inc., Arlington, Virginia. He has recently completed a study for the Psycho-pharmacology Service Center of the National Institute of Mental Health on storage and retrieval of psycho-pharmacological research data. In connection with this study, Dr. Berry organized a seminar on "Work Strategies" of scientific researchers.

Robert J. Howerton, Physicist in the Theoretical Division of the Lawrence Radiation Laboratory, Livermore, California, will speak on the user's approach to scientific information and also the activities of the Atomic Energy Commission in this field. In his field of concentration, neutron physics, he compiles, evaluates and interprets experimental determinations of neutron cross-sections, which are constants needed for the design calculations of devices such as nuclear reactors. Mr. Howerton is author of the Laboratory's three-volume periodical publication, *Tabu-*



SPECIAL LIBRARIES ASSOCIATION CONVENTION PROGRAM SUMMARY—San Francisco, California, May 28-June 1, 1961

	BREAKFAST	MORNING	LUNCHEON	AFTERNOON	DINNER	EVENING
SUNDAY MAY 28		Executive Board Meeting		Executive Board Meeting		Opening Reception Open Houses: Many Divisions
MONDAY MAY 29	Incoming Division Officers Newspaper Social Science	OPENING SESSION	Advertising Biological Sciences and Hospital Business & Finance Insurance Metals Museum Newspaper Picture Publishing Science-Technology Engineering Paper & Textiles Public Utilities Social Science	Advertising and Social Science Biological Sciences Business & Finance Geography & Map Hospital Insurance Metals Military Librarians Museum Newspaper Publishing Science-Technology Chemistry and Engineering Pharmaceutical Public Utilities Transportation	Geography & Map Open House Past-Presidents Science-Technology Petroleum Pharmaceutical	Advisory Council
TUESDAY MAY 30	Advertising Bulletin Editors Employment Chairmen Documentation Museum Newspaper Picture	GENERAL SESSION	Science-Technology Chemistry and Pharmaceutical	Address by Dr. S. I. Hayakawa, 1:15 p.m. ANNUAL BUSINESS MEETING Constitution and By-laws Committee	Incoming Chapter Presidents Biological Sciences and Hospital Metals Science-Technology Advisory Council	Museum and Picture Open Houses: Business & Finance, Insurance, Military Librarians, Publishing, Science-Technology
WEDNESDAY MAY 31	Insurance Joint Breakfast Advertising, Newspaper and Publishing Metals Science-Technology Chemistry Social Science International relations librarians Social Welfare	Advertising and Publishing Tour Joint Meetings Biological Sciences and Hospital; Documentation and Science-Technology; Museum and Picture Business & Finance Geography & Map Metals Military Librarians Social Science Transportation	Joint Luncheons Advertising and Publishing Biological Sciences and Hospital Business & Finance, Geography & Map, Social Science and Transportation Metals Picture	Advertising and Publishing Tour Joint Meeting Biological Sciences and Hospital Business & Finance Insurance Museum Newspaper Picture Science-Technology Social Science	Convention Wide Dutch Treat Cocktail Party, 6-8 p.m. BANQUET, 8 p.m.	
THURSDAY JUNE 1	Newspaper	Division Tours (All Divisions except Documentation)	Biological Sciences and Hospital Business & Finance, Insurance and Social Science Geography & Map and Transportation Museum and Picture Metals Science-Technology Petroleum	Division Tours Documentation Geography & Map and Transportation Museum and Picture Newspaper Publishing Science-Technology Petroleum		
FRIDAY JUNE 2	Executive Board Meeting Post Convention: Science-Technology Division, Petroleum Section Tour SLA Mid-Pacific Conference in Hawaii, June 2-8					

lated Neutron Cross-Sections. He is actively engaged in work on information retrieval.



Irwin Goldman, Senior Research Analyst at General Telephone & Electronics Laboratories Inc., New York, will represent the large institution's approach to the information problem. Mr. Goldman has been Adjunct Associate Professor of Management at Hofstra College since 1955. He began his career at Foster Wheeler Corporation as a chemical engineer, and from there went to Sylvania Electric Products Inc., where he served as Engineer, Senior Engineer, Assistant to Manager of the Physics Laboratory, Manager of Technical Planning and Associate Director of Research, Chemistry and Metallurgy.

William L. Wolfe, Supervisor of Infrared Information and Analysis Center, University of Michigan's Institute of Science and Technology,

will approach the problem of scientific information and its users from the specialized center approach. IRIA prepares annotated and subject bibliographies, state-of-the-art reports and miscellaneous publications in fulfilling their responsibility for the collection, analysis and dissemination of all information concerning military infrared research and development.



Dr. Sidney Passman, who will moderate the panel, is a physical scientist with the RAND Corporation and a specialist in the field of infrared radiation. He was first involved with the problems of information handling and use in the various aspects of this field. Dr. Passman is editor of the *International Journal of Infrared Physics*, was instrumental in the formation of the Infrared Literature specialist center, IRIA, and was Program Officer of the IRIS symposia.

Newspaper Division



San Francisco Examiner

Dwight Newton, TV columnist for the *San Francisco Examiner*, will speak at Monday's luncheon. Mr. Newton began his newspaper career as boy reporter and boys' section editor of the *Edmonton Journal* at 15. He was a copy boy on the

Los Angeles Examiner while attending high school, and later, file clerk and assistant librarian there. He was librarian at the *San Francisco Examiner* from 1929 until 1949, when he became round-about-town columnist for the Bay Area. Active in theater and radio work since 1934, Mr. Newton originated the "Schoolcast" program in San Francisco. He taught radio-journalism at Stanford and TV playwrighting at Mills College.

Last Minute Convention News . . .

Foreign Librarians Invited to Convention

The Special Libraries Association would like to welcome to its Convention in San Francisco foreign librarians who can include this meeting in their travel schedules. Lucile Dudgeon, Chairman of the Association's International Relations Committee has announced that SLA hospitality for colleagues from abroad includes waiving the registration fee and the establishment of a committee under Mrs. Sara P. Shepherd, which will arrange that each visiting librarian from another country will have as host-adviser a member of the San Francisco Chapter. In this way visiting librarians will be assured of an opportunity to attend those meetings that will interest him most and make it easier

to meet SLA members with similar interests. Foreign librarians planning to attend the SLA Convention should write as soon as possible to Mrs. Sara P. Shepherd, Bureau of International Relations, University of California, Berkeley, California.

Holiday Item

Members planning to attend the SLA Convention in San Francisco, May 28-June 1, will be interested in perusing the April issue of *Holiday*, which is devoted to a broad and colorful coverage of this fascinating city. Tips on what to wear and good restaurants in the area as well as descriptions of unique structures, customs and people will be particularly helpful.

Have You Heard . . .

Three CLR Grants

The Council on Library Resources, Inc. has reported a grant of \$25,000 to the National Bureau of Standards for a survey of the present status of mechanized information selection and facsimile retrieval systems. The Bureau's Data Processing Systems Division will survey the current state of the technology, in particular the status of devices for facsimile retrieval that use photographic media for information storage and the factors determining the latitude available to the users in setting up an information storage, selection and retrieval system where facsimile copies are desired.

William J. Barrow, Document Restorer, Richmond, Virginia, has received \$4,000 to study the adhesives used in bookbinding.

Randolph W. Church, Virginia State Librarian, received \$1,000 for the study of life expectancy of books in libraries.

Interlibrary Photographic Order Forms

The first official draft of an order form for library photoduplication has been developed by the Resources and Technical Services Division of ALA. Designed to "meet the problem of record keeping and bibliographic control," the form contains many features of the ALA interlibrary loan request form, already familiar to librarians. The new form, if approved, will be made up of four parts, with blue paper, inter-leaved carbon paper, to distinguish it from the white top-sheet of the interlibrary loan form and the same size as that form. Information may be obtained from the Standardized Photographic Order Forms Committee, Box 17—Butler Library, Columbia University, New York 27, New York.

Sevensma Prize, 1962

The IFLA Council has chosen Reading Rooms in National and University Libraries and Central Library Storage of Books as the two subjects for choice for the sixth Sevensma Prize. The competition is open to any member, under 40, of an association affiliated to the Federation. (SLA is an affiliated associa-

tion.) Papers should be drafted in either French or English. The article must be anonymous, bearing a symbol, and the symbol must be written on a sealed envelope containing the surname, Christian names, date and place of birth, nationality and address of the author. The essay must be 50-100 typed pages (foolscap); 100 pages is the maximum. The author of the winning article may publish it with mention of the award received, but the text must conform to that submitted to the jury. Entries should be addressed not later than March 31, 1962, in two copies to the Secretariat of the International Federation of Library Associations, c/o Bavarian State Library, Ludwigstrasse 23, Munich, Germany.

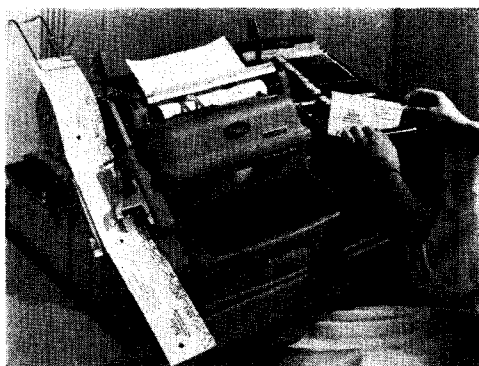
Two-Sided Reproduction of Book Pages

Duopage, a new process for the two-sided reproduction of books, is offered by Micro Photo Inc. This method utilizes the electrostatic principle and a new technique developed during two years of experimentation, and makes it possible to replace volumes in existing sets without the folding procedure necessary in one-sided reproduction. Page numbers appear in their original positions and space is saved. Volumes are supplied bound or unbound. Duopage is presently limited to books containing text matter and line drawings. Micro Photo Inc. is located at 1700 Shaw Avenue, Cleveland, Ohio.

Members in the News

DR. ESTELLE BRODMAN has accepted the position of Associate Professor of Medical History in the Department of Anatomy and Librarian of the Washington University Medical School, St. Louis, Missouri. Dr. Brodman was formerly with the National Library of Medicine.

MARJORIE R. HYSLOP has been appointed Manager of the American Society for Metals Documentation Service in Metals Park, Ohio. Mrs. Hyslop has been managing editor of *Metal Progress* for the past eight years.



Coded Cards for Cold-Type Composition

Justewriter, the automatic tape-operated composing machine made by Friden, Inc., Rochester, New York, is now available with Edge Card Punch and Edge Card Reader and permits preparation of listings in any sequence for duplicator or offset printing. The edge cards are the same commonly used as address and item cards in data processing systems. As the machine reads each card, it also code-punches the same information into a continuous paper tape. Tapes can be prepared containing many different listing sequences, then filed. At such time as a rerun of a particular list is required, its tape can be used to produce copy on repro proof paper or duplicator plates, at 100 words per minute, for subsequent printing. The operator is free to refile and select cards while the automatic operation takes place.

Formula for Book Preservation

Product Research and Development Corp., Blue Bell, Pennsylvania, has developed a fluid named Book Life, for restoring and preserving leather, cloth and paper bound books. It is available for \$2.50 a pint, \$4 a quart and \$12 a gallon.

Additions to Pius XII Memorial Library

The Pius XII Memorial Library, St. Louis University, has received the library of the Academy of Science of St. Louis, consisting of over 80,000 scientific volumes. Primarily reference material on the history of science, the material will complement the microfilm holdings of the Vatican Library Manuscript collection in this area. Publications from scientific institutions, universities and mu-

MAY-JUNE 1961

seums throughout the world and many regularly published papers from behind the Iron Curtain are included in the collection which will be continued and augmented by the Academy each year.

Colored Book Shelves

The Estey Corporation, Red Bank, New Jersey, is offering metal book shelving in ten different colors for libraries and offices. The units, under the name of Color-Range, come with colored tops and finished end panels, and there are three standard heights, 90, 60 and 42 inches, and three depths, 8, 10 and 12 inches. Color-Range periodical units for magazines and newspapers are also available. For further information write for the Color-Range Catalog No. 612.

Letters to the Editor

Special librarians are continually hunting statistics. A suggestion has been made that SLA publish more lists of sources of statistics in various fields. *Sources of Commodity Prices* has already been published. *Insurance Statistics* and *U. S. Sources of Petroleum and Natural Gas Statistics* are in process.

Can you suggest other fields in which such lists would be useful? If there are too few sources of statistics in some fields to warrant a pamphlet or book, perhaps several related fields could be combined.

A publication of this sort lends itself well to Division, Group or Chapter cooperative effort, since a committee can prepare cards and instructions which will assure getting the information in uniform style. Contributors to the project, even though from different parts of the country, can then be assigned certain periodicals or other sources to cover. When the editor receives cards with information entered from all sources which should be included, he can file the cards alphabetically, strike out duplicate headings, make sure that sources have been adequately covered, and submit the cards as manuscript.

If you have suggestions of fields that should be covered or wish to undertake a publication of this sort, preferably as a Division, Group or Chapter project, please write to the chairman of Nonserial Publications Committee.

JEAN E. FLEGAL, Chairman
Nonserial Publications Committee
Business Library, Union Carbide Corporation
Room 9-101, 270 Park Avenue
New York 17, New York

A comment, aroused by the two stimulating articles on union lists in the March issue: It is nice to have clearly identifiable sources for the

holders of periodical titles, but when space (and consequent cost) reduction seems more important, a code representation helps materially, whether one photoreproduces a D. Ag. type thatch or retypes copy. In the "Checklist" of periodical and serial titles currently received (1960) in medical libraries of the New England States¹ we found that roughly 3,750 titles WITHOUT FULL BIB. INFO. as reported among 46 libraries could be put on 158 pages mimeographed on one side only, using double columns. This contrasts with 629 pages used for 3,616 titles in the 1st ed. of the *N. J. List* and 9,160 titles upon 745 pages in its 2nd ed. (The titles alone, to use Rappaport's figure, would occupy approximately 120 pages for the *N. J. List* and 47 for the *N. England Checklist*.) We adopted Alfred Brandon's variation (as pioneered in his *Checklist of Periodical Titles Currently Received in Medical Libraries in the Southern Region*), which uses key letters for specific states and numbers, e.g. "Vt 1" represents the University of Vermont Medical School library. This procedure improves by geographic narrowing upon the straight numerical code of *Chemical Abstracts'* old list or that of the *Union List of Periodicals and Serials in Indian Libraries*.

In beginning the compilation of the *N. E. Checklist*, we tried the Gregory technique (State-City-Name) in designating holders for titles commencing with the letter A. Meanwhile, the *Southern Region Checklist* arrived, and a glance therein showed the advantage of that coded method of identification for sources. The number of pages filled was reduced to $\frac{1}{3}$ when the holders of the 541 A titles had been converted to numerical code by States. Perhaps some other novices in check or union list compiling may wish to try the Brandon device when they get down to it.

A sympathetic twang surged when I read "though present union lists are adequate for universities, their use is minimal for special libraries."

I wonder how often "the harassed librarian looking for that elusive journal" may continue in that condition as a result of the titles tossed out by compilers on account of obscurity. Much of the harassment arises from hunting the too OBSCURE. Blessed be the alphabet; the corporate entry is the valley of temptation for the unwary.

HAROLD OATFIELD, Research Department
Charles Pfizer & Co., Inc.
Groton, Connecticut

A new quinquennial checklist is now in the hands of cooperating libraries, for listing of library holdings of the 9,700 serials "and some non-serials" covered by *Chemical Abstracts*. (CHEMICAL ABSTRACTS. 1961 *List of Periodicals Abstracted . . . Key to Library Files*, checking edition. Columbus, Ohio: The Chemical Abstracts Service, 1961.) This very valuable union list has been greatly extended, beyond the 5,000-odd titles in the

1956 list, by the addition of new serials, of fringe-area serials not previously abstracted and by the inclusion of many monograph series, annuals, continuations such as proceedings of conference series, and treatises appearing in parts. There are also a number of monographic treatises included.

Librarians should be warned that the list, as distributed in its checking edition, includes these series and monographs and identifies them only by title, without indication of their non-periodical nature. The expressed intention of the Chemical Abstracts Service is to continue simple title listing in the final checklist, which should appear late in 1961.

Title entry for periodicals is a well-established form of entry. The *World List of Scientific Periodicals* entries are—except in North America—taken as a general standard of this form. This enters the *Journal of the American Chemical Society* under J, not under A. The *Chemical Abstracts* list has always adhered to this form, although its arrangement alphabetically by abbreviation, rather than by full significant word as in WLSP, has been somewhat confusing. Title entry is from this point of view acceptable and standardized.

However, insufficient information is given in the checking edition of the 1961 List, to identify the annual, monographic and nonserial items. Title alone is given for many of these. The name of a congress or conference, often incorrectly stated or begun with a non-distinctive form such as "Conference on . . ." "Symposium on . . ." has been given for a number, and in many cases it is necessary to identify these items through subject entries in the library catalog.

As a minimum identification, the nonperiodical nature of these items should be made clear. The name of an author or editor should be given where there is no appropriate corporate name. An imprint indicating a monograph (place and date at least) should replace the mere statement of country of publication. Arrangement in the checklist by title may be satisfactory, if that is the manner in which scientific users remember the work—but sufficient bibliographic identification must be given so that the item can be identified with entries given in other forms, as in other union lists and library card catalogs.

The Chemical Abstracts Service evidently does not recognize this difficulty. Their reply to questions from the University of Kansas Library ran as follows:

"In our 1961 *List of Periodicals* all items will be entered according to the titles just as they appear on the publications, not according to the Library of Congress catalog entry. As you know, the corporate body type entry or the inverted entry, as it is often called, is not commonly used in the scientific community. Because of this, *Chemical Abstracts* will retain its use of the title entry; a form of entry which is easily recognizable by those who work with the journals and other abstracted publications. The Library of Congress form of

¹ Out-of-Near-Print.

entry was selected for use only in the Checking Edition in order to facilitate the checking by large university libraries such as yours."

(Letter from James L. Wood, Librarian, Chemical Abstracts Service, February 24, 1961. It must also be noted that these items are NOT of course Library of Congress entries at all!)

Mr. Joseph Shipman, Librarian of the Linda Hall Library, reports a similar stand, in personal conversation in Cleveland with Mr. Wood.

Examples of the monographic and series items in the CA list and the corresponding *National Union Catalog* entries, are given here as an indication of the problem.

SAMPLE OF CONTRASTING CITATIONS

ITEM NO. CHEMICAL ABSTRACTS LIST

2250.1 Documentation in action.
(p. 27) U.S.

1774 International conference on
(p. 38) chemical engineering in
the coal industry. Stoke
Orchard, England, 1956.
Proceedings. Gt. Brit.

3348 International symposium
(p. 39) on aldosterone, Geneva,
1957. (Papers). Gt. Brit.

7356 New York Academy of
Medicine. Symposium on
trace analysis, New York,
1955. Papers. U.S.

2325 Symposium on electrolytes
(p. 79) in biological systems, Ma-
rine Biological Laboratory,
Woods Hole, Mass., 1954.
Papers. U.S.

2869 Symposium on glutathione,
(p. 79) Ridgefield, Conn., 1953.
Proceedings.

Of course, the corporate entry, to which CA makes specific objection, is not always the most easily identifiable characteristic of many publications. This is *not* the point which is being raised in criticism of the CA entries. In many cases title entry is the most characteristic item—but *additional information* to identify monographs, series other than periodicals, and treatises issued in parts is needed.

Mr. Shipman comments:

"The Chemical Abstracts people are quite adamant in their insistence that the LC form of entry is not

commonly used, or suitable for the scientific community. It strikes me that they might pay more attention to library needs, since ultimately, whether used by the scientific community or someone else, these titles must be identified in terms of the entries commonly accepted by American libraries." (Letter, March 17, 1961.)

One suggestion may be made—since photo offset has been used for reproduction (from IBM print-out) of the CA checklist, the items of this nature might well, *in addition to* the title entry under which they are listed, have given a photoreproduction of the *National Union Catalog* entry. Admittedly the aim of the checklist was a

NATIONAL UNION CATALOG ENTRY

Conference on the Practical Utilization of Recorded Knowledge, Present and Future, Western Reserve University, 1956.

Documentation in action. Jesse H. Shera (and others, eds.) New York, Reinhold, 1956. xv, 471 p. Gt. Brit. National Coal Board.

Chemical engineering in the coal industry; an international conference organized by the National Coal Board, Great Britain, and held at its Coal Research Establishment at Stoke Orchard, Cheltenham, England, in June 1956. Ed. By Forbes W. Sharpley. London, Pergamon, 1956. v, 141 p.

Geneva. Universite. Clinique therapeutique.

An international symposium on aldosterone, ed. by Alex F. Muller and Cecilia M. O'Connor. Boston, Little, Brown, 1958. x, 232 p.

Yoe, John Howe, 1892- ed.

Trace analysis; papers presented at a symposium on trace analysis held at the New York Academy of Medicine . . . 1955. Ed. by John H. Yoe and Henry J. Koch, Jr. New York, Wiley, 1957. xiii, 672 p.

Shanes, Abraham Morris, 1917- ed.

Electrolytes in biological systems incorporating papers presented at a symposium at the Marine Biological Laboratory in Woods Hole, Mass. . . . 1954. Washington, American Physiological Society, 1955. x, 243 p.

Colowick, Sidney P. ed.

Glutathione; proceedings of the symposium held at Ridgefield, Conn., Nov. 1953. Editors: S. Colowick (and others) N. Y. Academic Press, 1954. x, 341 p.

title-a-line checklist, but the additional space for the NUC entry would have saved many man-hours in checking. It may be noted that the cost to a large library of checking this list may well be \$200 or more. A corresponding amount devoted by *Chemical Abstracts* to preparing the extra information in the list would have saved much more and made many friends among the libraries which are the chief users of the list.

DONALD A. REDMOND

Science and Engineering Librarian
University of Kansas, Lawrence, Kansas

Off the Press . . .

Book Reviews

AN ENCYCLOPEDIA OF THE BOOK: Terms Used in Paper-Making, Printing, Bookbinding, and Publishing, with Notes on Illuminated Manuscripts, Bibliophiles, Private Presses, and Printing Societies. *Geoffrey Asball Glaister*. Cleveland and New York: World Publishing, 1960. illus. many in color. 484 p. \$17.50. (L.C. 60-6660)

This handsome volume, which has now been reviewed in a number of other library and book collector's periodicals, is a full picture indeed of the world of books and bookish things, though presented in large part from a point of view representing British interests and terminology. Nevertheless, because of its inclusiveness, and in spite of the minor inconvenience of a double alphabet (containing very brief addenda after most letters) along with a few disputable references—mentioned here only because other reviewers have demeaned the magnificence of the volume by citing them pompously—withal, the book may be a very useful addition to a familiar group of titles, such as those listed in the appended classified bibliography called "A Short Reading List." This bibliography is by no means exclusively British and includes many standard works found in American collections, such as *The Bookman's Glossary* (3rd ed., 1951), the ALA's *Glossary of Library Terms* (1943), Jackson's *Printing Primer* (1949), McMurtrie's *The Book* (1943).

For American libraries the Glaister book may be of reference value in conjunction with numerous other tomes that can enlighten readers who, in very miscellaneous reading, will find bookish references to technical terms that are not in regular dictionaries. In this regard, I would like to deplore reviews in professional journals which make carping criticisms of a book such as this by suggesting that its national origins weight the contents unnaturally or debating the utility of including references from too many fields of (as in this case) bibliophilic lore. No encyclopedic volume can ever satisfy everyone; the choice for inclusion here was Mr. Glaister's responsibility and, within the scope of his interests and the terms of his subtitle, he has delivered a reliable and useful book with only minor faults. As *The Booklist and Subscription Books Bulletin* (January 15, 1961) has said, in agreement with other reviews, "In spite of not attempting to cover American subjects consistently [it is a] . . . comprehensive, authoritative, well-edited work, with outstanding illustrations. It is recommended for public, college, and university libraries, and for all rare book collections".

Taking issue with the award of these laurels, however, I feel that the book—as good as it is—is by no means universally important enough to be recommended in such generalities without reserva-

tion. For example, insofar as rare book collections are concerned, there is little in Glaister that is not available elsewhere, very easily at hand in any library worthy of its designation as a rare book collection. The greater part of the information is such that is already available to most people working with rare books, either as already learned facts or easily found in common reference books on the shelves of most libraries. A decision to purchase a book such as this ought to be made upon a comparative basis of need and cost, which are still important factors in most libraries. It is a responsibility of reviewers that is too often neglected to remind their readers that every fine book is not the absolutely necessary work they all must have. With reference to the Glaister volume, and in the context of American special libraries' needs particularly, the art of books selection should be applied with care where funds are limited. It may be found that other books, though quite dissimilar, suit the needs of a collection and its clientele, and it may not be necessary to buy the latest and the best and the most with the same enthusiasm in every library! And so, with apologies to Mr. Glaister and his publishers, this reviewer should explain that if he seems to vacillate with regard to the *Encyclopedia of the Book* it is only because as a book collector he is delighted with it, but as a librarian he cannot really justify its purchase by all libraries in the same generous terms as have some other reviewers.

LEE ASH, Editor and Research Analyst
Yale University Library
New Haven, Connecticut

MCGRAW-HILL ENCYCLOPEDIA OF SCIENCE AND TECHNOLOGY, 15 vols. New York: McGraw-Hill, 1960. \$195. (L.C. 60-11000)

Subjects covered in this encyclopedia include, according to the publishers, all the natural sciences and all their major applications in engineering, agriculture, forestry, industrial biology, food and other technologies. For behavioral sciences and the applied sciences, such as medicine, pharmacy and pharmacology, the preprofessional sciences exemplified by physiological and experimental psychology, biochemistry, embryology and anatomy are included. The encyclopedia's 7,200 signed articles are the work of over 2,100 contributors. The articles are written for the non-specialist in the field. The present knowledge of the subject is emphasized, and little historical or biographical information is given. There are over 9,200 illustrations, including color plates. An annual supplement will be issued to keep the encyclopedia up to date.

A 600-page index, cross references at the end of articles and informative introductions to the set

all contribute to make this a relatively easy-to-use reference work. The present reviewers have compared several articles in the *McGraw-Hill Encyclopedia* (Mc) with corresponding articles in the *Kirk-Othmer Encyclopedia of Chemical Technology* (K-O) and *Van Nostrand's Scientific Encyclopedia* (V). The results are given below.

Fluid Catalytic Cracking: Mc contains a short (about two-thirds of a column) but clear description of the process along with a diagram. The information, which is part of the article on cracking, was located through a specific reference in the index.

V has about the same amount of information as Mc except for a clearer and more detailed diagram. The article was difficult to locate since this encyclopedia has no index.

K-O has a longer article on the process with information on history, catalysts and products formed. A flow diagram is given, and fluid catalytic cracking is compared with other catalytic cracking processes.

Telomer: Only K-O has an entry for this subject.
Rh factor: Mc and V have short but clear descriptions under Blood group. The item is not included in K-O.

Computers: The information is listed under various headings in Mc. The articles on Computers, Analog computers and Digital computers take up about 30 pages. Other related headings are Bit, Data processing systems, and Storage devices. Detailed explanations of the mathematical operations with examples of programs are given. Illustrations include circuit diagrams and parts of equipment. The articles, couched in somewhat technical language, seemed more difficult for the non-specialist to understand than corresponding articles in K-O and V.

V has a six-page non-technical discussion on computers. A logical circuit is illustrated; binary numbers and programing are briefly explained.

K-O has a 25-page non-technical discussion in the first supplement. The operation, applications with emphasis on chemical technology and trade names of the more common computers are included.

Bibliographies were generally more extensive in K-O than in Mc.

In the area of chemical technology K-O is strongest, as might be suspected in view of the subject field it covers. V showed up surprisingly well in three out of four subjects, though the absence of an index made it harder to locate the article in one instance. A further comparison was made between Mc and V by looking in V for 12 subjects covered by Mc in articles in one page or less. Only three out of 12 of these articles were included in V, an indication that a larger encyclopedia is needed for relatively minor subjects.

An encyclopedia written by over 2,100 contributors is bound to have some unevenness and some gaps, and thus must understandably fall somewhat

short of its publisher's glowing praises. Nevertheless, the subject coverage, physical appearance and make-up of the *McGraw-Hill Encyclopedia* makes this set a valuable addition to any science library, and for that matter to a nonscience library that can utilize an up-to-date science and technology encyclopedia.

G. JAHODA, H. MATSEN, B. A. SCHOBINGER
and M. D. SHANNON, Librarians
Technical Information Division
Esso Research and Engineering Company
Linden, New Jersey

Possible Microcard Reprint

If there is enough demand, Microcard Editions, Inc., will issue a Microcard edition of *Grosses Vollstaendiges Universal Lexikon Aller Wissenschaften Und Kuenste*, by Johann Henrick Zedler. This is a 68-volume encyclopedia, including four supplements, useful for biography and bibliography of the 16th and 17th centuries. The pre-publication price is \$500; after publication the price will be \$700. Advance orders should be sent to Microcard Editions, Inc., 901 26th Street, N.W., Washington 7, D. C.

Conferences and Congresses Current List

The 1961 edition of the annual *International Congress Calendar* has been published by the Union of International Associations. This is a chronological listing of international congresses, conferences, meetings and symposia scheduled to take place in 1961 and subsequent years. Date, place, address, theme, number of participants, plans for reports or proceedings, exhibitions and subject and geographical indexes are listed. Supplements to the calendar appear regularly in the monthly magazine *International Associations*. The price is \$3 or with a year's subscription to the magazine, \$8. It is available from the Union, Palais D'Egmont, Bruxelles 1, Belgium.

New Serials

ATLAS, first issued in March 1961, is a monthly containing articles, editorials, book reviews, news, poetry, art and letters from magazines and newspapers published outside the United States. The first issue contains 96 pages and is profusely illustrated. Published by the Worley Press, the annual subscription price is \$7.50 in the United States and \$8.50 outside the United States. Order from Atlas, 31 West 57th Street, New York 19, New York.

THE GERONTOLOGIST is a quarterly published by the Gerontological Society, Inc., containing articles, review papers, historical contributions and accounts of current projects on aging. The subscription price is \$5, and single issue price is \$1.25. The magazine may be ordered by writing to the publication office at 1712-24 Chouteau Avenue, St. Louis, Missouri.

SLA Authors

FREISER, LEONARD H. The Lamp by the Golden Door. *Library Journal*, vol. 86, no. 6, March 15, 1961, p. 1092-3.

GREENAWAY, EMERSON. Library Services to the Blind and Other Handicapped Groups. *ALA Bulletin*, vol. 55, no. 4, April 1961, p. 320-3.

JONES, ROBERT C. One Thousand 1960 Books for the Lower-Division College Library. *College & Research Libraries*, vol. 22, no. 2, March 1961, p. 101-24.

LECHNER, MARIAN G. Organization of a Recreation Library. *Employee Recreation*, vol. 22, no. 3, March 1961, p. 8-10.

MCDONOUGH, ROGER H. LSA—Success Story. *Library Journal*, vol. 86, no. 6, March 15, 1961, p. 1100-03.

SCHAEFER, RUTH L. How a Company Library More Than Justifies Its Cost. *The Office*, February 1961, p. 69-73.

SELLERS, ROSE Z. Prompted by Pride. *Wilson Library Bulletin*, vol. 35, no. 7, March 1961, p. 550-1.

SHARP, HAROLD S. Are You Ready To Step Up? *Trained Men*, vol. 41, no. 1, 1961, p. 8-11.

SHERA, JESSE H. An Educational Program for Special Librarians. *Journal of Education for Librarianship*, vol. 1, no. 3, Winter 1961, p. 121-28.

SMITH, HANNIS S. The White House Conference on Aging. *ALA Bulletin*, vol. 55, no. 3, March 1961, p. 247-51.

YAST, HELEN T., co-author. Hospital Library Service—a Selected Bibliography. *ALA Bulletin*, vol. 55, no. 4, April 1961, p. 347-9.

RECENT REFERENCES

Librarianship

EDITORIAL PRACTICE IN LIBRARIES. B. C. Brookes, ed. London: Aslib, 3 Belgrave Square, 1961. x, 204, illus. Members: 21s; Nonmembers 27s. 6d.

Chapters on editorial work, preparation of illustrations, layout and design, printing and duplicating processes, print-buying and publication of specialized journals. Bibliography.

MICROTEXTS AS MEDIA FOR PUBLICATION: The Papers and Discussion of a Symposium Held at Hatfield Technical College on the 10th November, 1959, under the Chairmanship of Mr. D. T. Richnell, B.A., F.L.A. Hertfordshire, England: Hertfordshire County Council Technical Information Service, 1960. 87 p. pap. apx. \$1.25.

Papers and discussion on the application of microrecording to publishing scientific and technical material. Appendixes.

PROCEEDINGS: Ninth Annual Meeting and Convention of the National Microfilm Association Held at New York, April 1960. Vernon D. Tate, ed. Annapolis, Maryland: National Microfilm Association, 1960. 260 p. pap. illus. \$8; prepaid, \$7.50.

Over 40 articles covering equipment, basic technology, application, new military specifications and library archival applications.

RULES FOR ALPHABETICAL FILING: As Standardized by American Records Management Association (Research Study No. 1). American Records Management Association, 1960. 65 p. pap. \$4. (Available from William Benedon, Lockheed Aircraft Company, P. O. Box 551, Burbank, California.)

ARMA committee report on a study of alphabetical filing in business offices. Book bibliography, company manuals bibliography, rule and page indexes.

SOCIAL SCIENCE RESEARCH AND LIBRARIES: Papers and Summary Proceedings of the Library Seminar on Research in the Social Sciences, New Delhi, 2-4 Jan. 1959. S. R. Ranganathan and Girja Kumar, eds. Bombay: Asia Publishing House; New York: Taplinger Publishing Co., Inc., 119 West 57th Street, 1960. 196 p. \$4.

Under the auspices of the Indian School of International Studies in Cooperation with the Indian Council of World Affairs Library. Outcome of seminar to explore possibilities of better library services for scholars in social science research. Bibliography. Index.

Encyclopedias

ENCYCLOPEDIA OF THE BIOLOGICAL SCIENCES: Reinhold Books in the Biological Sciences. Peter Gray, ed. New York: Reinhold Publishing Corporation, 430 Park Avenue, March-April, 1961. About 1,200 p. illus. \$17.50 pre-publication; \$20 list price.

Over 600 full-scale articles covering biological sciences, by international authorities in developmental, ecological, functional, genetic, structural and taxonomic aspects.

ENCYCLOPEDIA OF MICROSCOPY. George L. Clark, ed. New York: Reinhold Publishing Corporation, 430 Park Avenue, 1961. 600 p. illus. \$25.

Covers 26 kinds of microscopy in over 140 articles by international authorities.

ENCYCLOPEDIA OF SPECTROSCOPY. George L. Clark, ed. New York: Reinhold Publishing Corporation, 430 Park Avenue, 1961. 800 p. illus. \$25.

Over 185 articles especially written for this volume. Covers historical background, theory, instrumentation, experimental techniques, measurements, interpretations, applications and correlation with other techniques. Diagrams, charts, spectra, photographs and reference to each article.

Dictionaries and Directory

DICTIONARY OF MECHANICAL ENGINEERING. *Alfred Del Vecchio*. New York: Philosophical Library, 1961. 316 p. \$6. (L. C. 60-13664)

Prime definitions in the fields of architecture, automatic controls, engineering mechanics, fuels and combustion and power plants; related definitions in the field of basic electricity, heat treatment of metals, basic mathematics and welding.

INTERNATIONAL DICTIONARY OF PHYSICS AND ELECTRONICS, 2nd ed. *Walter C. Michels*, ed. Princeton, New Jersey: D. Van Nostrand Company, Inc., 120 Alexander Street, 1961.

Includes all new developments, such as in thermonuclear research, magnetohydrodynamics and space physics. Multilingual index in French, German, Russian and Spanish.

DIRECTORY OF NATIONAL ASSOCIATIONS OF BUSINESSMEN 1960. *Jay Judkins*. Washington, D. C.: U.S. Department of Commerce, 1960. iv, 81 p. pap. 50¢. (Available from Superintendent of Documents, Government Printing Office)

A supplement to the basic directory of 1949. Key word index and appendix.

Miscellaneous References

ADMINISTRATION OF ELECTRONIC DATA PROCESSING (Studies in Business Policy, No. 98). *Carl G. Gaudes*. New York: National Industrial Conference Board, Inc., 136 p. pap. Conference Board Associates, educational institutions and governmental agencies, \$5; non-Associates, \$25.

Experience gained through dollar investment, and application of study, system analysis and actual computer operations for 124 companies. Deals with administrative aspects. Appendix.

CONTEMPORARY PROBLEMS OF METALLURGY. *A. M. Samarin*, ed. Translated from Russian. New York: Consultants Bureau Enterprises, Inc., 1960. vi, 530 p. \$16. (L. C. 60-13949)

Published for the Board of Governors of Acta Metallurgica, Schenectady, New York. Metallurgical raw-material and fuel base of the USSR; metallurgy of iron and steel and nonferrous metals; working of metal by pressure; science of metals; general problems of metallurgy.

EFFECTIVE REPORT WRITING: For Business, Industry and Government. *Norman B. Sigband*. New York: Harpers, 1960. xiii, 688 p. \$6.75. (L. C. 60-7018)

Principles and techniques, reports and business letters, technical writing and oral presentation. Discusses collecting data, analysis and interpretation of information, the use of graphic and tabular aids, conference leadership and participation, and grammar and diction. Bibliography of bibliographies and reference guide. Index.

EMPLOYEE COMMUNICATIONS IN ACTION. *Robert Newcomb and Marg Sammons*. New York: Harpers, 1961. xii, 337 p. \$5.75. (L. C. 60-15201)

A guide for effective communication between employer and employee. Case studies in industry on wages, bargaining, automation, cost reduction, the annual report, business economics, politics, multi-plant operations, the recruitment manual and other related subjects. Bibliography, appendix, index.

FEDERAL FUNDS FOR SCIENCE: The Federal Research and Development Budget Fiscal Years 1959, 1960, and 1961 (Surveys of Science Resources Series, IX, NSF 60-80). *National Science Foundation*. Washington, D. C.: Superintendent of Documents, Government Printing Office, 1960. iii, 89 p. pap. 50¢.

Appendices: technical notes and statistical tables.

HANDBOOK OF ORGANOMETALLIC COMPOUNDS. *Herbert C. Kaufman*. Princeton, New Jersey: D. Van Nostrand Company, Inc., 120 Alexander Street, March 1961.

Tabulates 12,000 compounds. Gives determined properties, formula and references to the literature.

A HISTORY OF THE UNITED STATES WEATHER BUREAU. *Donald R. Whitnah*. Urbana, Illinois: University of Illinois Press, 1961. ix, 267 p. \$6. (L. C. 60-8345)

History of governmental growth and technical growth from inception, in 1870, to present. Bibliography. Index.

INDUSTRIAL RESEARCH LABORATORIES OF THE UNITED STATES, 11th ed. Washington, D. C.: National Academy of Sciences-National Research Council, 2101 Constitution Avenue. 700 p. \$12.

Lists activities, staff and ownership of 5,420 laboratories. Subject, geographic and personal-name indexes.

PREPARATION OF THE ANNUAL REPORT—a Document of Modern Business. Detroit: Research Bureau, Inc., Box 68, Kensington Sta., 1959. 175 p. illus. \$15. (L. C. 59-15911)

A comprehensive reference guide for the creation of annual reports covering all phases including ideas and creative areas, techniques, design, information on supplies, mailing, officers' messages and case histories.

PYRIDINE AND ITS DERIVATIVES, part 2. *Erwin Klingsberg*, ed. New York: Interscience Publishers, 1961. 558 p. \$32.50; subscription, single part \$37.50.

The second of a four-part analysis, and volume 14 of *The Chemistry of Heterocyclic Compounds*. Deals with reactions of pyridine compounds. 77 tables.

SCIENTIFIC RUSSIAN: A Textbook for Classes and Self-Study, 2nd ed. *James W. Perry*. New York: Interscience Publishers, Inc., 1961. xxvi, 565 p. \$9.50. (L. C. 61-9139)

Designed to teach a reading knowledge of scientific and technical Russian. Russian-English and English-Russian vocabulary.

A SHORT HISTORY OF TECHNOLOGY: From Earliest Times to A.D. 1900. *T. K. Derry and Trevor I. Williams.* New York: Oxford University Press, Inc., April 1961. 782 p. illus. \$8.50.

General historical survey, production, transportation, communication and record, power, chemistry, printing photography, cinema and related subjects discussed in two parts: from earliest times to A.D. 1750; and from A.D. 1750 to A.D. 1900.

STUDY ABROAD: International Handbook Fellowships, Scholarships, Educational Exchange, vol. 12, 1960-1961. New York: UNESCO Publications Center, 801 Third Avenue, 1960. 766 p. pap. \$3.

Over 100,000 scholarships and fellowships in 115 states and territories of the United Nations. Index and list of organizations. In English, French and Spanish.

THE TOXICOLOGY AND BIOCHEMISTRY OF THE AROMATIC HYDROCARBONS. *Horace W. Gerarde.* Princeton, New Jersey: D. Van Nostrand Company, Inc., 120 Alexander Street, 1961.

In two parts. Part I: overall treatment from point of view of basic chemistry. Part II: detailed discussions of 20 individual aromatic hydrocarbons and their mixtures.

TRAINING MANAGERS ABROAD, 2 vols. *Jane Duxtan and Barbara Mekanowitzky.* New York: Council for International Progress in Management (USA), Inc., 247 Park Avenue, 1960. vol. I: vi, p. 1-291; vol. II: p. 292-527, lxi. pap. \$12.50 each.

Prepared under a grant from the Ford Foundation, this is a research report discussing role of management consultants and reporting on over 450 international managerial training and development programs of private and government organizations throughout the world. Bibliography.

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